



ERAPOL L-E93A PREPOLYMER

Era Polymers Pty Ltd

Chemwatch: 9-50207

Version No: 1.5

Safety Data Sheet following ANSI Z400.1 recommendations

Chemwatch Hazard Alert Code: 2

Issue Date: 21/03/2014

Print Date: 31/07/2014

Initial Date: 21/03/2014

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

Product Identifier

Product name	ERAPOL L-E93A PREPOLYMER
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	Not Applicable
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	Polyurethane prepolymer
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Details of the manufacturer/importer

Registered company name	Era Polymers Pty Ltd
Address	25-27 Green Street 2019 NSW Australia
Telephone	+61 (0)2 9666 3788
Fax	+61 (0)2 9666 4805
Website	www.erapol.com.au
Email	erapol@erapol.com.au

Emergency telephone number

Association / Organisation	CHEMWATCH
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
877 715 9305	+612 9186 1132	Not Available

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

Una vez conectado y si el mensaje no está en su idioma preferido, por favor marque 02

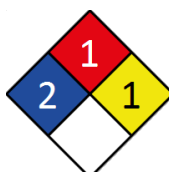
SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	1	
Toxicity	2	
Body Contact	0	
Reactivity	1	
Chronic	2	

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme



SAFETY ADVICE

Risk Phrases	May cause SENSITISATION by inhalation.
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Limited evidence of a carcinogenic effect.

Harmful by inhalation.

Keep out of reach of children.

Keep container tightly closed.

Keep container in a well ventilated place.

Keep away from food, drink and animal feeding stuffs.

Do not breathe gas/fumes/vapour/spray.

Wear suitable protective clothing.

Wear suitable gloves.

In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible).

If swallowed, seek medical advice immediately and show this container or label.

Use only in well ventilated areas.

Avoid exposure - obtain special instructions before use.

Dispose of this material and its container at hazardous or special waste collection point.

In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Other hazards

Cumulative effects may result following exposure*.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Not Available	>99	Polyurethane prepolymer (TDI/PTMEG)
584-84-9	<1	toluene-2,4-diisocyanate

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

Eye Contact	If this product comes in contact with eyes: <ul style="list-style-type: none">▶ Wash out immediately with water.▶ If irritation continues, seek medical attention.▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: <ul style="list-style-type: none">▶ 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 or combustion products are inhaled remove from contaminated area.▶ Lay patient down. Keep warm and rested.▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.▶ Transport to hospital, or doctor. Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted.
Ingestion	<ul style="list-style-type: none">▶ Immediately give a glass of water.▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

	Treat symptomatically. Toluene diisocyanate is a known pulmonary sensitiser. Annual medical surveillance should be conducted including pulmonary history, examination of the heart and lungs, 14 x 17 inch (35 x 47 cm) x-ray and pulmonary function testing (FCV, FEV1). In normal commercial preparations of toluene diisocyanate, the 2,4-isomer dominates in the ratio 4:1. However it is also hydrolysed, in air, more rapidly than the 2,6-isomer. Airway sensitivities may result from the appearance of immunoglobulins in the blood. Frequent inability to detect antibodies to TDI in clinical cases may result from the routine use of diagnostic antigens containing predominantly 2,4-TDI, whereas individuals may have been exposed to atmospheres in which 2,6-TDI was the predominant isomer. [Karol & Jin, Frontiers of Molecular Toxicology, pp 55-61, 1992]
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SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

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- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

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.
- ▶ Wear full body protective clothing with breathing apparatus.
- ▶ Prevent, by any means available, spillage from entering drains or water course.
- ▶ Use water delivered as a fine spray to control fire and cool adjacent area.
- ▶ Avoid spraying water onto liquid pools.

Fire/Explosion Hazard

- ▶ Combustible.
- ▶ Slight fire hazard when exposed to heat or flame.
- ▶ Heating may cause expansion or decomposition leading to violent rupture of containers.
- ▶ On combustion, may emit toxic fumes of carbon monoxide (CO).
- ▶ May emit acrid smoke.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills

- ▶ Remove all ignition sources.
- ▶ Clean up all spills immediately.
- ▶ Avoid breathing vapours and contact with skin and eyes.
- ▶ Control personal contact with the substance, by using protective equipment.
- ▶ Contain and absorb spill with sand, earth, inert material or vermiculite.

Major Spills

- Moderate hazard.
- ▶ Clear area of personnel and move upwind.
 - ▶ Alert Fire Brigade and tell them location and nature of hazard.
 - ▶ Wear breathing apparatus plus protective gloves.
 - ▶ Prevent, by any means available, spillage from entering drains or water course.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- ▶ **DO NOT allow clothing wet with material to stay in contact with skin**
- ▶ Avoid all personal contact, including inhalation.
- ▶ Wear protective clothing when risk of exposure occurs.
- ▶ Use in a well-ventilated area.
- ▶ Prevent concentration in hollows and sumps.
- ▶ **DO NOT enter confined spaces until atmosphere has been checked.**

Other information

- ▶ Store in original containers.
- ▶ Keep containers securely sealed.
- ▶ No smoking, naked lights or ignition sources.
- ▶ Store in a cool, dry, well-ventilated area.
- ▶ Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container

- ▶ Metal can or drum
- ▶ Packaging as recommended by manufacturer.
- ▶ Check all containers are clearly labelled and free from leaks.

Storage incompatibility

- ▶ Avoid reaction with oxidising agents
- ▶ **NOTE:** May develop pressure in containers; open carefully. Vent periodically.
- ▶ Segregate from alcohol, water.

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
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US ACGIH Threshold Limit Values (TLV)	toluene-2,4-diisocyanate	Toluene-2, 4- or 2, 6-diisocyanate (or as a mixture)	0.005 ppm	0.02 ppm	Not Available	TLV® Basis: (Resp sens); (); (SEN); (A4)
US OSHA Permissible Exposure Levels (PELs) - Table Z1	toluene-2,4-diisocyanate	Toluene-2,4-diisocyanate	Not Available	Not Available	0.14 mg/m3 / 0.02 ppm	(TDI)
US NIOSH Recommended Exposure Limits (RELs)	toluene-2,4-diisocyanate	TDI; 2,4-TDI; 2,4-Toluene diisocyanate	Not Available	Not Available	Not Available	Ca See Appendix A

EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
toluene-2,4-diisocyanate	0.25 / 0.005 ppm	0.02 / 0.75 ppm	1.5 / 0.083 ppm	1.5 / 0.51 ppm

Ingredient	Original IDLH	Revised IDLH
Polyurethane prepolymer (TDI/PTMEG)	Not Available	Not Available
toluene-2,4-diisocyanate	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. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly.
Personal protection	
Eye and face protection	<ul style="list-style-type: none"> Safety glasses with side shields Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available.
Skin protection	See Hand protection below
Hands/feet protection	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> frequency and duration of contact, chemical resistance of glove material, glove thickness and dexterity <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p>
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> Overalls. P.V.C. apron. Barrier cream. Skin cleansing cream.
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
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* 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	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-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)

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Light amber liquid, clear		
Physical state	Liquid	Relative density (Water = 1)	1.05
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
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)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Reacts	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur.
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	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Inhalation hazard is increased at higher temperatures.
Ingestion	The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum. High molecular weight material; on single acute exposure would be expected to pass through gastrointestinal tract with little change / absorption. Occasionally accumulation of the solid material within the alimentary tract may result in formation of a bezoar (concretion), producing discomfort.
Skin Contact	Skin contact is not thought to produce harmful health effects (as classified under EC Directives using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the material may still produce health damage following entry through wounds, lesions or abrasions. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment. Practical evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a substantial number of individuals at a greater frequency than would be expected from the response of a normal population. Pulmonary sensitisation, resulting in hyperactive airway dysfunction and pulmonary allergy may be accompanied by fatigue, malaise and aching. Significant symptoms of exposure may persist for extended periods, even after exposure ceases. Symptoms can be activated by a variety of nonspecific environmental stimuli such as automobile exhaust, perfumes and passive smoking.

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TOXICITY

IRRITATION

Continued...

	Not Available	Not Available
toluene-2,4-diisocyanate	TOXICITY	IRRITATION
	Inhalation (rat) LC50: 14 ppm/14 hr	Eye (rabbit): 100 mg - SEVERE
	Inhalation (rat) LC50: 600 ppm/6 hr	Skin (rabbit): 500 mg(open)-SEVERE
	Oral (rat) LD50: 5800 mg/kg	Skin (rabbit):500 mg/24hr-moderate
	Not Available	Not Available

ERAPOL L-E93A PREPOLYMER	Allergic reactions which develop in the respiratory passages as bronchial asthma or rhinoconjunctivitis, are mostly the result of reactions of the allergen with specific antibodies of the IgE class and belong in their reaction rates to the manifestation of the immediate type. In addition to the allergen-specific potential for causing respiratory sensitisation, the amount of the allergen, the exposure period and the genetically determined disposition of the exposed person are likely to be decisive. Factors which increase the sensitivity of the mucosa may play a role in predisposing a person to allergy. They may be genetically determined or acquired, for example, during infections or exposure to irritant substances. Immunologically the low molecular weight substances become complete allergens in the organism either by binding to peptides or proteins (haptens) or after metabolism (prohaptens).
TOLUENE-2,4-DIISOCYANATE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important.

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

CARCINOGEN	toluene-2,4-diisocyanate	US Air Toxics Hot Spots TSD for Describing Available Cancer Potency Factors US Environmental Defense Scorecard Recognized Carcinogens	2B P65-MC Ca See Appendix A P65
RESPIRATORY	toluene-2,4-diisocyanate	US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs) - Respiratory	X √

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

DO NOT discharge into sewer or waterways.

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	<ul style="list-style-type: none">Containers may still present a chemical hazard/ danger when empty.Return to supplier for reuse/ recycling if possible. Otherwise: <ul style="list-style-type: none">If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same
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- ▶ product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
 - ▶ Where possible retain label warnings and MSDS and observe all notices pertaining to the product.
- Legislation addressing waste disposal requirements may differ by country, state and/ or territory.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
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Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	toluene-2,4-diisocyanate	Y

SECTION 15 REGULATORY INFORMATION

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

toluene-2,4-diisocyanate(584-84-9) is found on the following regulatory lists	"US TSCA Section 8 (d) - Health and Safety Data Reporting","US - California 22 CCR - Appendix VII -Basis for Listing Hazardous Waste","US - RCRA (Resource Conservation Recovery Act) - Basis for Listing Hazardous Waste","International Council of Chemical Associations (ICCA) - High Production Volume List","US EnviroChem and Cancer Database (ECCD) Chemicals Found to Cause Mammary Tumors in Laboratory Animals by the National Toxicology Program","US CAA (Clean Air Act) - HON Rule - Synthetic Organic Chemical Manufacturing Industry Chemicals","International Maritime Dangerous Goods Requirements (IMDG Code)","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","US - Illinois - Toxic Air Contaminants","US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants","US - New Jersey Right to Know Hazardous Substances (Spanish)","US - California Air Toxics "Hot Spots" List (Assembly Bill 2588) Substances for Which Emissions Must Be Quantified","US - Louisiana Toxic Air Pollutant Ambient Air Standards","US - Idaho - Limits for Air Contaminants","US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens","US - Hawaii Air Contaminant Limits","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","US National Toxicology Program (NTP) Technical Reports Index","US - RCRA (Resource Conservation & Recovery Act) - Appendix VII to Part 261 - Basis for Listing Hazardous Waste","US ACGIH Threshold Limit Values (TLV) - Carcinogens","US - California - SCAQMD - Toxic Air Contaminants","US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide","US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number","US - North Carolina Control of Toxic Air Pollutants","US NTP (National Toxicology Program) - Management Status Report","US - California Permissible Exposure Limits for Chemical Contaminants","US - Kentucky Listing of Hazardous Air Pollutants","US EPA Integrated Risk Information System (IRIS)","US - New Jersey Right to Know Hazardous Substances (English)","US - New Jersey Environmental Hazardous Substances List","US RCRA (Resource Conservation & Recovery Act) - List of Hazardous Wastes","US EPCRA Section 313 Chemical List","US - Arizona State List of Hazardous Air Pollutants","US - California - Accidental Release Prevention (CalARP) -Combined List of Chemicals and Threshold Quantities","US - California Proposition 65 - Reproductive Toxicity","US - Vermont Hazardous Constituents","US CAA (Clean Air Act) - HON Rule - Organic HAPs (Hazardous Air Pollutants)","FisherTransport Information","US - Massachusetts Toxics Use Reduction Act (TURA) listed chemicals","US - New York List of Hazardous Substances","US - Minnesota Chemicals of High Concern","US - California 22 CCR - Toxic Wastes or Toxic Substances","US Department of Transportation (DOT), Hazardous Material Table","US FDA Indirect Food Additives: Adhesives and Components of Coatings - Substances for Use Only as Components of Adhesives - Adhesives","United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)","OECD List of High Production Volume (HPV) Chemicals","US - Oregon Permissible Exposure Limits (Z-2)","US NFPA Hazardous Chemical Data Compilation","US - Louisiana Minimum Emission Rates Toxic Air Pollutants","US - Michigan Exposure Limits for Air Contaminants","US Coast Guard, Department of Homeland Security Part 153: Ships Carrying Bulk Liquid, Liquefied gas or compressed gas hazardous materials. Table 1 to Part 153 --Summary of Minimum Requirements","US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Reactive Materials","US National Toxicology Program (NTP) 12th Report Part B. Reasonably Anticipated to be a Human Carcinogen","US - Michigan Air Quality Division List of Screening Levels","US - Ohio Regulated Toxic Chemicals with Thresholds for Accidental Release Prevention","US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants","US - Vermont Hazardous wastes which are Discarded Commercial Chemical Products or Off-Specification Batches of Commercial Chemical Products or Spill Residues of Either","US NFPA Hazardous Chemical Data Sheets Information","US - California - Proposition 65 - Priority List for the Development of MADLs for Chemicals Causing Reproductive Toxicity","US - North Dakota Air Pollutants - Unit Risk Factors","US - California - 22 CCR - Hazardous Wastes and Hazardous Materials - Appendix X","US - Minnesota Hazardous Substance List","US - California - Accidental Release Prevention (CalARP) - Table of Toxic Endpoints","US List of Lists - Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112(r) of the Clean Air Act","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)","US - Kentucky Categories of Toxic Air Contaminants","US - Maine Hazardous Air Pollutants List and Reporting Thresholds","US - Alaska Limits for Air Contaminants","US DOE Temporary Emergency Exposure Limits (TEELs)","US - North Dakota Air Pollutants - Guideline Concentrations","US NIOSH Recommended Exposure Limits (RELs)","US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values","US - Washington Permissible exposure limits of air contaminants","US California - Aerosol Coating Product Emissions - Maximum Incremental Reactivity (MIR) Values","US ACGIH Threshold Limit Values (TLV) - Notice of Intended Changes","US National Toxicology Program (NTP) 12th Report Part A Known to be Human Carcinogens","US - Delaware Pollutant Discharge Requirements - Reportable Quantities","US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List","OECD Existing Chemicals Database","US - Washington Discarded Chemical Products List - "U" Chemical Products","Sigma-AldrichTransport Information","US - Wisconsin Control of Hazardous Pollutants - Substances of Concern for Sources of Incidental Emissions of Hazardous Air Contaminants","US - Rhode Island Hazardous Substance List","US NFPA Fire Hazard Properties of Flammable Liquids, Gases, and Volatile Solids Table","US - California Proposition 65 - Carcinogens","United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)","US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)","US FDA List of "Indirect" Additives Used in Food Contact Substances","US ACGIH Threshold Limit Values (TLV)","GESAMP/EHS Composite List - GESAMP Hazard Profiles","US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants","US RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents","US - Massachusetts - Right To Know Listed Chemicals","US - Ohio - Extremely Hazardous Substances - Threshold Quantities","US SARA Section 302 Extremely Hazardous Substances","International Air Transport Association (IATA) Dangerous Goods Regulations","US - California Toxic Air Contaminant List Category II","US - Washington Dangerous waste constituents list","US - Maine
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Chemicals of Concern List", "IMO IBC Code Chapter 17: Summary of minimum requirements", "US - Pennsylvania - Hazardous Substance List", "US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants", "US - Wisconsin Control of Hazardous Pollutants - Emission Thresholds, Standards and Control Requirements (Hazardous Air Contaminants)", "US - New Jersey Right to Know - Special Health Hazard Substance List (SHSL): Carcinogens", "US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory", "US - Massachusetts Oil & Hazardous Material List", "US Clean Air Act - Hazardous Air Pollutants", "US EPA Acute Exposure Guideline Levels (AELs) - Final", "US - Michigan Polluting Materials List", "US - Connecticut Hazardous Air Pollutants", "US EPA High Production Volume Program Chemical List", "US OSHA Permissible Exposure Levels (PELs) - Table Z1"

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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