

## Material Safety Data Sheet WPM 200 Part A

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME	WPM 200 PART A
SUPPLIER	ARDEX ENDURA (INDIA) PRIVATE LIMITED Corporate Office & Regd. Office: Unit No. 406 & 407, "Brigade Rubix", No. 20, HMT Campus, Yeshwanthapur Hobli, Bengaluru - 560013. Karnataka, INDIA. CIN No: U24233KA1997PTC022383 Tel: +91 80 66746500 Email: customercare@ardexendura.com Visit us: www.ardexendura.com
SYNONYMUS	"water-based epoxy hardener", "curing agent", "Shelter HydrEpoxy 200", "Sealer/Binder - Part A"
PRODUCT USE	Requires that the two parts be mixed by hand or mixer before use, in accordance with manufacturers directions. Mix only as much as is required. Do not return the mixed material to the original containers. Part A of a two component water-based epoxy system used for sealing porous substrates and as an admixture with cement-based mortars.

## 2. HAZARDS IDENTIFICATION

### STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON - DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

## CHEMWATCH HAZARD RATINGS



RISK : May cause SENSITISATION by skin contact.

Cumulative effects may result following exposure\*.

- \* (limited evidence).
- SAFETY : Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin.

To clean the floor and all objects contaminated by this material, use water and detergent.

If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
polyamide resin	Not avail.	10 - 30
Triethylenetetramine	112-24-3	<1
Water	7732-18-5	>60

### 4. FIRST-AID MEASURES

### SWALLOWED

- Rinse mouth out with plenty of water.
- For advice, contact a Poisons Information Centre or a doctor.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

## EYE

If this product comes in contact with the eyes:

- 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

If skin contact occurs:

- Remove all contaminated clothing, including footwear
- Remove adhering sticky material using a waterless hand cleaner
- Flush skin and hair with soap and running water, repeating as required .
- In event of visible or subsequent irritation seek medical attention.

## INHALED

- 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, without delay.

## NOTES TO PHYSICIAN

Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

## EXTINGUISHING MEDIA

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

## FIRE FIGHTING

- 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 courses.

- Use water delivered as a fine spray to control fire and cool adjacent area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- The material is not readily combustible under normal conditions.
- However, it will break down under fire conditions and the organic component may burn.
- Not considered to be a significant fire risk.
- Heat may cause expansion or decomposition with violent rupture of containers.
- Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.

Other combustion products include carbon dioxide (CO2), nitrogen oxides (NOx) and ammonia.

FIRE INCOMPATIBILITY

Avoid reaction with oxidising agents, nitrocellulose and nitrocellulose lacquers.

HAZCHEM

None

## 6. ACCIDENTAL RELEASE MEASURES

## MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable labelled container for waste disposal.

#### MAJOR SPILLS

Minor hazard.

- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment as required
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services..

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

#### 7. HANDLING AND STORAGE

#### PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.

- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. SUITABLE CONTAINER
- Plastic drum.
- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid storage with oxidisers, nitrocellulose and nitrocellulose lacquers.

## STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



X: Must not be stored together

O: May be stored together with specific preventions

+: May be stored together

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## EXPOSURE CONTROLS

The following materials had no OELs on our records

- triethylenetetramine: CAS:112-24-3
- water: CAS:7732-18-5

MATERIAL DATA

POLYAMIDE RESIN:

#### TRIETHYLENETETRAMINE:

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effectlevels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to

assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine

to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.
- WPM 200 PART A:

None assigned. Refer to individual constituents.

#### POLYAMIDE RESIN:

Polyamide hardeners have much reduced volatility, toxicity and are much less irritating to the skin and eyes than amine hardeners. However commercial polyamides may contain a percentage of residual unreacted amine and all unnecessary contact should be avoided.

#### TRIETHYLENETETRAMINE:

CEL TWA: 1 ppm, 6 mg/m<sup>3</sup>; STEL: 2 ppm, 12 mg/m<sup>3</sup>

[compare OEL TWA (Sweden): 1 ppm, 6 mg/m<sup>3</sup>; STEL: 2 ppm, 12 mg/m<sup>3</sup> Sensitiser]



WATER:

No exposure limits set by NOHSC or ACGIH. PERSONAL PROTECTION

EYE

- Safety glasses with side shields; or as required,
- 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 lens 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. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation lens should be removed in a clean environment only after workers have washed hands thoroughly.
  [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

#### HANDS/FEET

Wear chemical protective gloves. eg. PVC gloves with barrier cream Wear safety footwear.

OTHER

- Overalls.
- Barrier cream

#### • Eyewash unit.

RESPIRATOR

•Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

#### ENGINEERING CONTROLS

Use in a well-ventilated area.

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. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### APPEARANCE

Translucent green/yellow high viscosity liquid with a mild amine odour; emulsifies in water.

PHYSICAL PROPERTIES Liquid. Does not mix with water. Floats on water. Liquid State Molecular Weight Not Applicable Melting Range (°C) Not Available Not Available Viscositv Boiling Range (°C) 100 Solubility in water (g/L) Partly Miscible Flash Point (°C) Not Available pH (1% solution) Not Available Decomposition Temp (°C) Not Available 9.5-10.5 pH (as supplied) Autoignition Temp (°C) Not Available Vapour Pressure (kPa) Not Available Upper Explosive Limit (%) Not Available Specific Gravity (water=1) 0.97 - 0.99Not Available Relative Vapour Density (air=1) Not Available Lower Explosive Limit (%) Not Available Volatile Component (%vol) Not Available **Evaporation Rate** 

## **10. CHEMICAL STABILITY AND REACTIVITY INFORMATION**

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

#### **11. TOXICOLOGICAL INFORMATION**

POTENTIAL HEALTH EFFECTS ACUTE HEALTH EFFECTS

## SWALLOWED

Considered an unlikely route of entry in commercial/industrial environments.

The liquid is discomforting to the gastro-intestinal tract and may be harmful if swallowed in quantity.

Ingestion may result in nausea, abdominal irritation, pain and vomiting.

EYE

The liquid is highly discomforting to the eyes and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.

The vapour/mist is discomforting to the eyes.

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

#### SKIN

The liquid is discomforting to the skin and is capable of causing allergic skin reactions which may lead to dermatitis.

Toxic effects may result from skin absorption.

Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

#### INHALED

Not normally a hazard due to non-volatile nature of product.

The vapour is mildly discomforting to the upper respiratory tract Inhalation of vapour is more likely at higher than normal temperatures.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by inhalation of vapour/spray mist, accidental ingestion and skin contact with the material.

Sensitisation reactions may appear suddenly after repeated

symptom free exposures.

Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

#### TOXICITY AND IRRITATION

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

WPM 200 - PART A:

Not available. Refer to individual constituents.

POLYAMIDE RESIN:

TOXICITY

IRRITATION

Oral (rat) LD50: 23100 mg/kg Skin (rabbit): Mild [Man HENK]

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

TRIETHYLENETETRAMINE:

TOXICITY	IRRITATION
Oral (rat) LD50: 2500 mg/kg	Skin (rabbit): 490 mg Open SEVERE
Dermal (rabbit) LD50: 805 mg/kg	Skin (rabbit): 5 mg/24 SEVERE
	Eye (rabbit); 49 mg - SEVERE
	Eye (rabbit):20 mg/24 h - Moderate

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. A weakly sensitising substance

which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

Ethyleneamines are very reactive and can cause chemical burns, skin rashes and asthma-like symptoms. It is readily absorbed through the skin and may cause eye blindness and irreparable damage. As such, they require careful handling. In general, the low-molecular weight polyamines have been positive in the Ames assay (for genetic damage); however, this is probably due to their ability to chelate copper.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.

For alkyl polyamines:

The alkyl polyamines cluster consists of two terminal primary and at least one secondary amine groups and are derivatives of low molecular weight ethylenediamine, propylenediamine or hexanediamine. Toxicity depends on route of exposure. Cluster members have been shown to cause skin irritation or sensitisation, eye irritation and genetic defects, but have not been shown to cause cancer.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

Triethylenetetramine is a severe irritant to skin and eyes and may induce skin sensitisation. Acute exposure to saturated vapour via inhalation was tolerated without impairment but exposure to aerosol may lead to reversible irritations of the mucous membranes in the airways. Studies done on experimental animals showed that it does not cause cancer or foetal developmental defects.

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

WATER:

No significant acute toxicological data identified in literature search.

#### **12. ECOLOGICAL INFORMATION**

TRIETHYLENETETRAMINE:

POLYAMIDE RESIN:

DO NOT discharge into sewer or waterways.

TRIETHYLENETETRAMINE:

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For ethyleneamines:

Adsorption of the ethyleneamines correlates closely with both the cation exchange capacity (CEC) and organic content of the soil. Soils with increased CEC and organic content exhibited higher affinities for these amines. This dependence of adsorption on CEC and organic content is most likely due to the strong electrostatic interaction between the positively charged amine and the negatively charged soil surface.

For alkyl polyamines:

All members of this cluster are miscible or soluble in water.

Environmental Fate: Members of this cluster are expected to have varying degrees of mobility in the soil.

While models suggest that they are likely to react rapidly with photochemically produced hydroxyl radials (with half-lives of an hour), as they are do not readily exist in vapour form this is not expected to be a predominant removal pathway for these chemicals. Experimental data and results from estimation models indicate that all members of this cluster have the potential to biodegrade aerobically under environmental conditions. Models indicate that the members of this cluster are likely to partition predominately to soil and water. All chemicals in this cluster are expected to have low environmental persistence and a low potential for bioaccumulation.

Ecotoxicity: Aquatic toxicity data indicate acute toxicity to fish and daphnia is low. Algae appear to be the most sensitive organism with

several members of the cluster having measured or estimated toxicity values indicative of moderate toxicity. Chronic toxicity for all cluster members is estimated; it is generally low for fish and algae, but high for daphnia.

For Triethylenetetramine (TETA):

Log Pow (unprotonated form): -1.4; Vapor pressure: ca. 1 Pa at 20 C. Ethylenediamine: Koc - 4766;

Diethylenetriamine: Koc – 19111.

Environmental Fate: High adsorption of ethylenediamine and diethylenetriamine is most likely due to electrostatic interaction. TETA has a high potential for geoaccumulation. TETA is not readily or inherently biodegradable and can be regarded as non-biodegradable.

Aquatic Fate: TETA is completely miscible with water forming an alkaline solution (pH 10 at 10 g/L). TETA was not found to have undergone hydrolysis after 36 days. TETA is not eliminated during waste water treatment.

Direct photolysis of TETA in the aquatic compartment is not to be expected.

Atmospheric Fate: The half-life due to photooxidative degradation by OH-radicals in the atmosphere is estimated to be 1.7 hours and is not expected to be a significant removal process from the environment.

Ecotoxicity: TETA is not expected to bioaccumulate. TETA could be toxic to fish and has been found to be slightly to relatively nontoxic to guppies. Other, un-validated, test results with orfe and fathead minnow are in the same order of magnitude. Toxicity of TETA to Daphnia water fleas is generally low. Red winged blackbirds are the most sensitive species to TETA. TETA has been shown to effect the growth of Pseudomonas fluorenscens microorganisms. TETA is toxic to Scenedesmus subspicatus algae and has been shown to effect the growth of Selenastrum capricornutum algae. TETA has not been shown to interfere with normal embryonic development of sea urchin eggs; however, sea urchin larvae are more sensitive to TETA.

Prevent, by any means available, spillage from entering drains or water courses.

Ecotoxicity				
Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
polyamide resin	No Data Available	No Data Available		
triethylenetetramine	LOW	No Data Available	LOW	MED

#### **13. DISPOSAL CONSIDERATIONS**

• Recycle wherever possible or consult manufacturer for recycling options.

• Consult State Land Waste Management Authority for disposal.

- Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.
- Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.
- Extreme caution should be taken when heating the resin/curing agent mix.
- Recycle containers where possible, or dispose of in an authorised landfill.

#### **14. TRANSPORTATION INFORMATION**

HAZCHEM

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

#### **15. REGULATORY INFORMATION**

POISONS SCHEDULE : S5

#### REGULATIONS

Regulations for ingredients

triethylenetetramine (CAS: 112-24-3) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "IMO Provisional Categorization of Liquid Substances - List 3: (Tradenamed) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – Norway", "OSPAR National List of Candidates for Substitution – United Kingdom"

water (CAS: 7732-18-5) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – Norway"

No data for WPM 200 - Part A (CW: 4709-47) No data for polyamide resin (CAS: , Not avail)

16. OTHER INFORMATION						
REPRODUCTIVE HEALTH GUIDELINES						
Ingredient	ORG	UF	Endpoint	CR	Adeq	TLV
triethylenetetramine	2.9 mg/m³	10	D	NA	-	
These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGS represent an 8-hour time-weighted average unless specified						
otherwise.						
CR = Cancer Risk/10000; U	UF = Uncertainty fa	ctor:				
TLV believed to be adequate	e to protect reprod	uctive hea	lth:			
LOD: Limit of detection						
Toxic endpoints have also b	een identified as:					
D = Developmental; R = Re	productive; TC = Tr	ransplace	ntal carcinogen			
Jankovic J., Drake F.: A Scr	eening Method for	Occupatio	nal Reproductive			
American Industrial Hygiene	Association Journa	al 57: 641	-649 (1996).			
EXPOSURE STANDARD FOR	MIXTURES					
"Worst Case" computer-aide	ed prediction of vap	our comp	onents/concentration	ons:		
Composite Exposure Standa	ard for Mixture (TW	A) (mg/m:	3): 6 mg/m³			
If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.						
Component Breathing Zone	ppm Breathing Zor	ne mg/m³	Mixture Conc: (%).			
Component	Breathing zone (p	pm)	Breathing zone (m	g/m³)	Mixture (	Conc (%)
triethylenetetramine	1.00		6.0000		1.0	
triethylenetetramine	0.00		0.0000		0.0	
Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.						
If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.						
At the "Composite Exposure Standard for Mixture" (TWA) (mg/m <sup>3</sup> ): 6 mg/m <sup>3</sup>						
TRAINING ADVICE	: The deta	ails of this	data sheet must be	e passed o	on to all p	ersonnel handling the product.

#### DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.