# URALANE® 5774 C US

Version	Revision Date:	SDS Number:	Date of last issue: 10/24/2017
1.4	03/14/2019	400001010057	Date of first issue: 09/22/2015

# SECTION 1. IDENTIFICATION

Product name	:	URALANE® 5774 C US	
Manufacturer or supplier's de	tai	ls	
Company name of supplier Address	:	Huntsman Advanced Materials Americas LLC P.O. Box 4980 The Woodlands, TX 77387 United States of America (USA)	
Telephone	:	Non-Emergency: (800) 257-5547	
E-mail address of person responsible for the SDS	:	SDS@huntsman.com	
Emergency telephone number	:	Chemtrec: (800) 424-9300 or (703) 527-3887	
Recommended use of the chemical and restrictions on use			
Recommended use	:	Hardener	
Restrictions on use	:	For industrial use only.	

### SECTION 2. HAZARDS IDENTIFICATION

ance with 29 CFR 1910.1200 : Category 4
: Category 4
: Category 1
: Category 2
: Category 2
: Category 2
: Category 2 (Liver)
: Category 1 (Liver)
: Category 2 (Kidney)
: Category 1



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**URALANE® 5774 C US** Version Revision Date: SDS Number: Date of last issue: 10/24/2017 03/14/2019 400001010057 1.4 Date of first issue: 09/22/2015 Long-term (chronic) aquatic : Category 1 hazard **GHS** label elements Hazard pictograms Signal word Danger 5 Hazard statements : H302 + H332 Harmful if swallowed or if inhaled. H317 May cause an allergic skin reaction. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H361 Suspected of damaging fertility or the unborn child. H371 May cause damage to organs (Liver) if swallowed. H372 Causes damage to organs (Liver) through prolonged or repeated exposure if swallowed. H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed. H410 Very toxic to aquatic life with long lasting effects. : Prevention: Precautionary statements P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. **Response:** P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P363 Wash contaminated clothing before reuse. P391 Collect spillage. Storage: P405 Store locked up. Disposal: P501 Dispose of contents/container to an approved facility in



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accordance with local, regional, national and international regulations.

#### Other hazards

None known.

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
4,4'-methylenebis(2-ethylaniline)	19900-65-3	10 - 20
tris(methylphenyl) phosphate	1330-78-5	10 - 20
Formaldehyde, polymer with 2- ethylbenzenamine	69178-41-2	5 - 10
4,4'-methylenebis[N-sec-butylaniline]	5285-60-9	5 - 10
1,1',1",1"'-ethylenedinitrilotetrapropan-2-ol	102-60-3	1 - 5
2-ethylaniline	578-54-1	1 - 5
melamine	108-78-1	0.1 - 1
ethylbenzene	100-41-4	0.1 - 0.25

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

#### **SECTION 4. FIRST AID MEASURES**

General advice	:	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Treat symptomatically. Get medical attention if symptoms occur.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	If on skin, rinse well with water.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Induce vomiting immediately and call a physician. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and	:	None known.



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Notes to physician	: Treat symptomatically.
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#### **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media	•	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NOx)
Specific extinguishing methods	:	No data is available on the product itself.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

#### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use.

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			Avoid contact with For personal prote Smoking, eating a application area. Dispose of rinse w regulations. Persons susceptib allergies, chronic of be employed in an used.	skin and eyes. ection see section 8. nd drinking should be prohibited in the rater in accordance with local and national le to skin sensitisation problems or asthma, or recurrent respiratory disease should not by process in which this mixture is being
Cor	ditions for safe storage	:	Keep container tight Containers which ar upright to prevent le Observe label precat Keep in properly lab	ly closed in a dry and well-ventilated place. e opened must be carefully resealed and kept akage. utions. belled containers.
Mat	erials to avoid	:	For incompatible n SDS.	naterials please refer to Section 10 of this
Fur stor	ther information on age stability	:	Stable under norm	al conditions.

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-ethylaniline	578-54-1	TWA	5 ppm 19 mg/m3	OSHA Z-1
melamine	108-78-1	TWA	3 mg/m3	US WEEL
ethylbenzene	100-41-4	TWA	20 ppm	ACGIH
		TWA	100 ppm 435 mg/m3	OSHA Z-1

#### **Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Samplin g time	Permissible concentratio n	Basis
ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 g/g creatinine	ACGIH BEI

#### Personal protective equipment

Respiratory protection

: In the case of vapour formation use a respirator with an approved filter.

Hand protection



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Rema	ks	: The suitability for a specific workplace should be discusse with the producers of the protective gloves.	
Eye pr	otection	: Eye wash bottle with pure water Tightly fitting safety goggles	
Skin a	nd body protection	<ul> <li>Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work processing of the dangerous substance at the work processin</li></ul>	
Hygier	ne measures	: When using do n When using do n Wash hands befo	ot eat or drink. ot smoke. ore breaks and at the end of workday.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	beige
Odour	:	amine-like
Odour Threshold	:	No data is available on the product itself.
рН	:	No data is available on the product itself.
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	212 °F / 100 °C Method: estimated, closed cup
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Flammability (liquids)	:	No data is available on the product itself.
Upper explosion limit / Upper flammability limit	:	No data is available on the product itself.
Lower explosion limit / Lower flammability limit	:	No data is available on the product itself.
Vapour pressure	:	< 1 hPa (68 °F / 20 °C)
Relative vapour density	:	No data is available on the product itself.
Relative density	:	1.15 - 1.4 (77 °F / 25 °C)
Density	:	1.15 - 1.4 g/cm3 (77 °F / 25 °C)

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:	Solubil Wate	ity(ies) er solubility	:	insoluble (68 °F	/ 20 °C)
	Solu	bility in other solvents	:	No data is availa	ble on the product itself.
l	Partitio	n coefficient: n-	:	No data is availa	ble on the product itself.
	Auto-ig	nition temperature	:	No data is availa	ble on the product itself.
ĺ	Decom	position temperature	:	> 392 °F / > 200	°C
	Self-Ac decom (SADT	celerating position temperature )	:	No data is availa	ble on the product itself.
,	Viscosi Visco	ity osity, dynamic	:	60,000 mPa.s (7	7 °F / 25 °C)
I	Explos	ive properties	:	No data is availa	ble on the product itself.
(	Oxidizi	ng properties	:	No data is availa	ble on the product itself.
]	Molecu	lar weight	:	No data available	e
I	Particle	e size	:	No data is availa	ble on the product itself.

#### SECTION 10. STABILITY AND REACTIVITY

Reactivity Chemical stability Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use. Stable under normal conditions. No hazards to be specially mentioned.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong acids Strong bases Strong oxidizing agents
		None known.
Hazardous decomposition products	:	Carbon oxides Nitrogen oxides (NOx) Oxides of phosphorus
		No hazardous decomposition products are known.
Hazardous decomposition	:	carbon dioxide
products		carbon monoxide
		Nitrogen oxides



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#### SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	No data is available on the product itself.
Acute toxicity Acute oral toxicity - Product		Acute toxicity estimate : 1 451 mg/kg
	•	Method: Calculation method
Acute inhalation toxicity - Product	:	Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.
		Acute toxicity estimate: 2.5 mg/l Exposure time: 4 h
		Test atmosphere: dust/mist Method: Calculation method
		Acute toxicity estimate: 2.5 mg/l Exposure time: 4 h
		Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity - Product	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute toxicity (other routes of administration)	:	No data available

#### Skin corrosion/irritation

#### **Components:**

4,4'-methylenebis(2-ethylaniline): Species: Rabbit Assessment: No skin irritation Method: OPPTS 870.2500 Result: No skin irritation

tris(methylphenyl) phosphate: Species: Rabbit Result: No skin irritation

4,4'-methylenebis[N-sec-butylaniline]: Species: Rabbit Result: No skin irritation

melamine: Species: Rabbit Method: OECD Test Guideline 404 Result: No skin irritation

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#### Serious eye damage/eye irritation

#### **Components:**

4,4'-methylenebis(2-ethylaniline): Species: Rabbit Result: No eye irritation Assessment: No eye irritation Method: Acute Eye Irritation

tris(methylphenyl) phosphate: Species: Rabbit Result: No eye irritation

4,4'-methylenebis[N-sec-butylaniline]: Species: Rabbit Result: No eye irritation

1,1',1",1"'-ethylenedinitrilotetrapropan-2-ol: Species: Rabbit Result: Irritating to eyes. Assessment: Irritant

melamine: Species: Rabbit Remarks: slight irritation

#### Respiratory or skin sensitisation

#### Components:

4,4'-methylenebis(2-ethylaniline): Exposure routes: Skin Species: Humans Result: The product is a skin sensitiser, sub-category 1A.

tris(methylphenyl) phosphate: Exposure routes: Skin Species: Mouse Method: OECD Test Guideline 429 Result: Does not cause skin sensitisation.

4,4'-methylenebis[N-sec-butylaniline]: Exposure routes: Skin Result: Does not cause skin sensitisation.

melamine: Exposure routes: Skin Species: Guinea pig Method: OECD Test Guideline 406 Result: Does not cause skin sensitisation.

Assessment:

No data available

#### Germ cell mutagenicity

#### Components:

4,4'-methylenebis(2-ethylaniline):



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	Genoto	xicity in vitro	:	Test Type: Ames to Test system: Salm Metabolic activation Method: Mutagenia mutation assay) Result: positive	test nonella typhimurium on: with and without metabolic activation city (Salmonella typhimurium - reverse
	tris(met) Genoto	hylphenyl) phosphate: xicity in vitro	:	Metabolic activation Result: negative	on: with and without metabolic activation
	4,4'-met Genotox	thylenebis[N-sec-butyl xicity in vitro	anili :	ne] <b>:</b> Method: OECD Te Result: negative	est Guideline 471
	melamir Genotox	ne: xicity in vitro	:	Metabolic activation Method: Chromos Result: negative	on: with and without metabolic activation ome aberration test in vitro
				Metabolic activation Method: In vitro m Result: negative	on: with and without metabolic activation ammalian cell gene mutation test
	ethylber Genotox	nzene: xicity in vitro	:	Metabolic activation Method: OECD Te Result: negative	on: with and without metabolic activation est Guideline 473
	Compo 4,4'-met Genoto	<u>nents:</u> thylenebis(2-ethylanilir xicity in vivo	ne): :	Test Type: In vivo Species: Mouse Cell type: Somatic Application Route: Exposure time: 72 Dose: 56 - 140 mg Method: OECD Te Result: Not classif Test Type: In vivo Species: Mouse Cell type: Somatic Application Route: Dose: 9.3 - 37 mg Method: OECD Te Result: positive	micronucleus test Intraperitoneal injection h g/kg est Guideline 474 ied due to inconclusive data. micronucleus test Intraperitoneal injection /kg est Guideline 474
	melamir Genoto	ne: xicity in vivo	:	Application Route Method: Skin Sen Result: negative	Intraperitoneal injection sitization
	ethylber Genoto	nzene: xicity in vivo	:	Method: OECD Te	est Guideline 474

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		Result: negative				
		Method: OECD <sup>-</sup> Result: negative	Test Guideline 486			
<mark>Com</mark> 4,4'-∣ Gerr Asse	p <b>onents:</b> methylenebis(2-ethylanilir n cell mutagenicity- essment	ne): Positive result(s) supported by po or chemical strue mutagens	) from in vivo somatic cell mutagenicity tests sitive results from in vitro mutagenicity assays cture activity relationship to known germ cell			
tris(r Gerr Asse	nethylphenyl) phosphate: n cell mutagenicity- ssment	: In vitro tests did	not show mutagenic effects			
Gerr Asse	n cell mutagenicity- essment	: No data availabl	e			
Carc	inogenicity					
<u>Com</u> 4,4'-I Spec Appl Expo Dose Freq Meth Resu	ponents: methylenebis(2-ethylanilir cies: Rat, male and femal- ication Route: Oral osure time: 103 weeks e: 9 - 10 mg/kg uency of Treatment: 24 h od: OECD Test Guideline ult: positive	ne): e our è 451				
Com 4,4'- Carc Asse tris(r	n <b>ponents:</b> methylenebis(2-ethylanilir inogenicity - essment nethylphenyl) phosphate <b>:</b>	ne): : Limited evidence : Animal testing d	e of carcinogenicity in animal studies id not show any carcinogenic effects.			
IARC	<b>;</b>	Group 2B: Possibly melamine Group 2B: Possibly ethylbenzene	r carcinogenic to humans			
ACC	SIH	Confirmed animal of humans	carcinogen with unknown relevance to			
		ethylbenzene				
OSH	Α	No component of the equal to 0.1% is on	his product present at levels greater than or OSHA's list of regulated carcinogens.			
NTP		No component of the equal to 0.1% is ide	nis product present at levels greater than or entified as a known or anticipated carcinogen			

**URALANE® 5774 C US** Version Revision Date: SDS Number: Date of last issue: 10/24/2017 03/14/2019 400001010057 1.4 Date of first issue: 09/22/2015 by NTP. **Reproductive toxicity Components:** tris(methylphenyl) phosphate: Effects on fertility Species: Rat, male and female **Application Route: Oral** General Toxicity - Parent: Lowest observed adverse effect level: 62.5 mg/kg body weight Target Organs: Testes, Ovary Method: OECD Test Guideline 415 **Result:** positive 1,1',1",1"'-ethylenedinitrilotetrapropan-2-ol: Species: Rat, male and female Application Route: Oral Method: OECD Test Guideline 422 Result: negative ethylbenzene: General Toxicity - Parent: No observed adverse effect level: 500 ppm Method: OECD Test Guideline 416 **Components:** tris(methylphenyl) phosphate: Effects on foetal 5 Species: Rat, female development Application Route: Oral Dose: 20, 100, 400, 750 milligram per kilogram General Toxicity Maternal: No-observed-effect level: 20 mg/kg body weight Method: OPPTS 870.3700 **Result: Teratogenic effects** 1,1',1"',1"'-ethylenedinitrilotetrapropan-2-ol: Species: Rat, female **Application Route: Oral** General Toxicity Maternal: No observed adverse effect level: 400 mg/kg body weight Result: No teratogenic effects melamine: Species: Rat, female Application Route: Oral General Toxicity Maternal: No observed adverse effect level: 600 mg/kg body weight Method: OECD Test Guideline 414 Result: No teratogenic effects ethylbenzene: General Toxicity Maternal: No observed adverse effect level: 500 ppm Teratogenicity: No observed adverse effect level: 2,000 ppm Developmental Toxicity: No observed adverse effect level:



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500 ppm

#### Components:

tris(methylphenyl) phosphate: Reproductive toxicity -Assessment

: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

#### STOT - single exposure

#### Components:

4,4'-methylenebis(2-ethylaniline): Exposure routes: Ingestion Target Organs: Liver Assessment: May cause damage to organs.

#### STOT - repeated exposure

#### Components:

4,4'-methylenebis(2-ethylaniline): Exposure routes: Ingestion Target Organs: Liver Assessment: Causes damage to organs through prolonged or repeated exposure.

Exposure routes: Ingestion Target Organs: Kidney Assessment: May cause damage to organs through prolonged or repeated exposure.

ethylbenzene: Exposure routes: Inhalation Target Organs: Lungs, Liver, Kidney, Central nervous system Assessment: May cause damage to organs through prolonged or repeated exposure.

#### Repeated dose toxicity

#### Components:

4,4'-methylenebis(2-ethylaniline): Species: Rat, male and female LOAEL: 7.5 - 8 mg/kg/d Application Route: Ingestion Exposure time: 2,160 h Number of exposures: 7 d Method: Subchronic toxicity

Species: Rat, male and female NOAEL: 90 mg/kg/d Application Route: Skin contact Exposure time: 2,160 h Number of exposures: 5 d Method: Subchronic toxicity

tris(methylphenyl) phosphate: Species: Rat, male and female



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NOEL: 1000 mg/kg Application Route: Ingestion Exposure time: 2,160 h Method: Subchronic toxicity

1,1',1"',1"'-ethylenedinitrilotetrapropan-2-ol: Species: Rat, male and female NOAEL: 1000 mg/kg/d Application Route: Ingestion Exposure time: 1,176 h Number of exposures: 7 d Method: Subacute toxicity

Species: Rat, male and female NOAEL: 300 mg/kg/d Application Route: Ingestion Exposure time: 1,176 h Number of exposures: 7 d Method: Subacute toxicity

melamine: Species: Rat, male and female LOAEL: 72 mg/kg Application Route: Ingestion Exposure time: 13 Weeks Method: Subchronic toxicity

ethylbenzene: Species: Rat, male and female NOAEL: 75 mg/kg bw Application Route: oral (gavage) Exposure time: 28 d Dose: 75/250/750 mg/kg bw Group: yes Method: OECD Test Guideline 407 Target Organs: Liver Remarks: Subacute toxicity

Species: Rat, male and female NOAEL: 75 mg/kg bw Application Route: oral (gavage) Exposure time: 90 d Dose: 75/250/750 mg/kg bw Group: yes Method: OECD Test Guideline 408

Species: Mouse, male and female NOAEL: 3.4 mg/l Application Route: Inhalation Exposure time: 28 d Dose: 0,4/1,7/3,4 mg/L Group: yes Method: OECD Test Guideline 412

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Species: Rat, male and female NOAEL: 1084 NOAEL: mg/m3 Application Route: inhalation (vapour) Exposure time: 104 week Dose: 325/1084/3251 mg/m3 Group: yes Method: OECD Test Guideline 453

Species: Rat, male and female NOAEL: 4.74 mg/l Application Route: Inhalation Exposure time: 13 week Dose: 0,47/1,18/2,37/3,55/4,74 mg/L Group: yes Method: OECD Test Guideline 413 Target Organs: Liver

Species: Mouse, male and female NOAEL: 3251 NOAEL: mg/m3 Application Route: Inhalation Exposure time: 104 week Dose: 325/1084/3251 mg/m3 Group: yes Method: OECD Test Guideline 453

Species: Rabbit, male and female NOAEL: 6.8 mg/l Application Route: Inhalation Exposure time: 28 d Dose: 1,7/3,4/6,8 mg/L Group: yes Method: OECD Test Guideline 412

Repeated dose toxicity - : No data available Assessment

#### Aspiration toxicity

#### Components:

ethylbenzene: May be fatal if swallowed and enters airways.

#### Experience with human exposure

General Information:	No data available

Inhalation: No data available

Skin contact: No data available

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Ey	e contact:	No data available	
Ing	gestion:	No data available	
<b>To</b> No	oxicology, Metabolism o data available	n, Distribution	
<b>Ne</b> No	eurological effects		
<b>Fu</b> Ing	rther information gestion:	No data available	

#### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

<u>Components:</u>	
4,4'-methylenebis(2-ethylaniline): Toxicity to fish :	LC50 (Oryzias latipes (Orange-red killifish)): 20.6 mg/l Exposure time: 96 h Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 203
tris(methylphenyl) phosphate: Toxicity to fish :	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.6 mg/l Exposure time: 96 h Test Type: static test
1,1',1'',1'''-ethylenedinitrilotetrapro Toxicity to fish :	pan-2-ol: LC50 (Leuciscus idus (Golden orfe)): 4,600 mg/l Exposure time: 96 h Test Type: flow-through test Test substance: Fresh water Method: DIN 38412 LC50 (Leuciscus idus (Golden orfe)): 2,700 mg/l Exposure time: 48 h Test Type: static test Method: DIN 38412
melamine: Toxicity to fish :	LC50 (Oncorhynchus mykiss (rainbow trout)): > 3,000 mg/l Exposure time: 96 h Test Type: semi-static test Test substance: Fresh water

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eti Tc	thylbe oxicity	nzene: ⁄ to fish	:	LC50: 4.2 mg/l Exposure time: 96	) h	
				LC50: 9.2 mg/l Exposure time: 96	۶ h	
				LC50: 12.1 mg/l Exposure time: 96	3 h	
				LC50: 5.1 mg/l Exposure time: 96	) h	
<u>Сс</u> 4,4 Тс аq	ompo 4'-me oxicity quatic	nents: thylenebis(2-ethylanili to daphnia and other invertebrates	ne): :	EC50 (Daphnia m Exposure time: 48 Test Type: static t Method: OECD Te	agna (Water flea)): 0.35 mg/l 3 h est est Guideline 202	
tris Tc aq	is(met oxicity quatic	hylphenyl) phosphate: to daphnia and other invertebrates	:	EC50 (Daphnia m Exposure time: 48 Test Type: static t Method: OECD Te	agna (Water flea)): 0.146 mg/l 3 h est est Guideline 202	
1, <sup>-</sup> Tc aq	,1',1'', oxicity quatic	1 <sup>™</sup> -ethylenedinitrilotetra to daphnia and other invertebrates	apro :	pan-2-ol: IC0 (Daphnia mag Exposure time: 48 Test Type: static t Method: Directive	gna (Water flea)): > 100 mg/l 3 h est 67/548/EEC, Annex V, C.2.	
ma Tc aq	elami oxicity quatic	ne: to daphnia and other invertebrates	:	LC50 (Daphnia m Exposure time: 48 Test Type: static t Test substance: F Method: Aquatic I Daphnids	agna (Water flea)): > 1,000 mg/l 3 h est resh water nvertebrate Acute Toxicity Test, Freshwater	
etl To aq	thylbe oxicity quatic	nzene: to daphnia and other invertebrates	:	EC50: 1.81 - 2.38 Exposure time: 48	mg/l 3 h	
Cc tris Tc pla	ompo is(met oxicity ants	p <b>nents:</b> hylphenyl) phosphate: to algae/aquatic	:	ErC50: 0.4042 mg Exposure time: 72 Test Type: static t Method: OECD Te	g/l 2 h est est Guideline 201	
1, <sup>-</sup> Tc pla	,1',1'', <i>'</i> oxicity ants	1'''-ethylenedinitrilotetra v to algae/aquatic	apro :	pan-2-ol: EC50 (Other): 150 Exposure time: 72 Test substance: F	0.67 mg/l 2 h resh water	

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			Method: Directive	67/548/EEC, Annex V, C.3.
mela Toxio plant	nmine: city to algae/aquatic ts		EC50 (Selenastru Exposure time: 96 Test Type: static 1 Test substance: F	m capricornutum (green algae)): 325 mg/l 5 h est resh water
ethyl Toxic plant	benzene: city to algae/aquatic ts	:	IC50: 4.6 mg/l Exposure time: 72	2 h
			EC50: 3.6 mg/l Exposure time: 96	5 h
			NOEC: 3.4 mg/l Exposure time: 96	3 h
			EC50: 7.7 mg/l Exposure time: 96	3 h
<mark>Com</mark> 4,4'-⊦ M-Fa toxic	<b>ponents:</b> methylenebis(2-ethylanili actor (Acute aquatic ity)	ne): :	1	
tris(n M-Fa toxic	nethylphenyl) phosphate: actor (Acute aquatic ity)	:	1	
Com	iponents:			
tris(r Toxie toxic	nethylphenyl) phosphate: city to fish (Chronic ity)	:	NOEC (Other): 0. Exposure time: 28	01 mg/l 3 d
1,1', Toxic toxic	1",1"'-ethylenedinitrilotetr city to fish (Chronic ity)	aprop :	oan-2-ol <b>:</b> GLP: yes	
mela Toxio toxic	imine: city to fish (Chronic ity)	:	NOEC (Oncorhyn Exposure time: 28 Test Type: semi-s Test substance: F	chus mykiss (rainbow trout)): 1,500 mg/l 3 d tatic test resh water
ethyl Toxic toxic	benzene: city to fish (Chronic ity)	:	NOEL: 0.96 mg/l Exposure time: 7	d
Com 4,4'- Toxic aqua (Chr	ponents: methylenebis(2-ethylanili city to daphnia and other atic invertebrates onic toxicity)	ne): :	NOEC (Daphnia r Exposure time: 2' Test Type: semi-s Test substance: F Method: OECD T	nagna (Water flea)): 0.00525 mg/l d tatic test resh water est Guideline 211

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rsion	Revision Date: 03/14/2019	SD 40	S Number: 0001010057	Date of last issue: 10/24/2017 Date of first issue: 09/22/2015
tris(mo Toxici aquati (Chroi	ethylphenyl) phosphate: ty to daphnia and other ic invertebrates nic toxicity)	:	NOEC (Daphni Exposure time: Test Type: sem	a magna (Water flea)): 0.1 mg/l 21 d ii-static test
1,1',1' Toxici aquati (Chroi	',1'''-ethylenedinitrilotetra ty to daphnia and other ic invertebrates nic toxicity)	aprc :	pan-2-ol: NOEC (Daphni Exposure time: Test Type: sem Test substance Method: OECD	a magna (Water flea)): 10 mg/l 21 d ni-static test :: Fresh water Test Guideline 211
melan Toxici aquati (Chroi	nine: ty to daphnia and other ic invertebrates nic toxicity)	:	NOEC (Daphni Exposure time: Test Type: sem Test substance	a magna (Water flea)): 18 mg/l 21 d ni-static test : Fresh water
<u>Comp</u> 4,4'-m M-Fac toxicit	ponents: nethylenebis(2-ethylanilir ctor (Chronic aquatic y)	ne): :	10	
tris(mo M-Fac toxicit	ethylphenyl) phosphate: ctor (Chronic aquatic y)	:	1	
Comp	onents:			
tris(mo Toxici	ethylphenyl) phosphate: ty to microorganisms	:	EC50 (activated Exposure time:	d sludge): > 1,000 mg/l 3 h
Toxici organi	ty to soil dwelling isms	:	No data availat	ble
Plant	toxicity	:	No data availat	ble
Sedim	nent toxicity	:	No data availat	ble
Toxici organi	ty to terrestrial isms	:	No data availat	ble
Ecoto	xicology Assessment			
<u>Comp</u> 4,4'-m Acute	ponents: hethylenebis[N-sec-butyl aquatic toxicity	anil :	ne] <b>:</b> Very toxic to ac	juatic life.
	enzene:			

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ethyl Chro	lbenzene: onic aquatic toxicity	:	Harmful to aquat	ic life with long lasting effects.
Toxi	city Data on Soil	:	No data available	9
Othe the e	er organisms relevant to environment	:	No data available	9
Pers	sistence and degradabi	lity		
Com	ponents:			
tris(r Biod	nethylphenyl) phosphate egradability	:	Test Type: aerob Inoculum: Sewag Concentration: 10 Result: Readily b Biodegradation: Exposure time: 2 Method: OECD T	ic ge (STP effluent) 00 mg/l iodegradable. 80 % 8 d <sup>-</sup> est Guideline 301C
1,1', <sup>-</sup> Biod	1",1"'-ethylenedinitrilotetr egradability	apro:	pan-2-ol: Inoculum: activat Concentration: 10 Result: Inherently Biodegradation: Exposure time: 2 Method: OECD T	ed sludge 07 mg/l y biodegradable. 36 % 8 d Test Guideline 302B
			Inoculum: Domes Concentration: 30 Result: Not readi Biodegradation: Exposure time: 2 Method: Directive	stic sewage 0 mg/l ly biodegradable. 9 % 8 d e 67/548/EEC Annex V, C.4.D.
mela Biod	amine: egradability	:	Inoculum: activat Concentration: 10 Result: Not readi Biodegradation: Exposure time: 2 Method: OECD T	ed sludge 00 mg/l ly biodegradable. < 10 % 8 d Test Guideline 302B
ethyl Biod	lbenzene: egradability	:	Result: Readily b Biodegradation: Exposure time: 2	iodegradable. > 60 % 8 d
Bioc Dem	hemical Oxygen aand (BOD)	:	No data available	9
Cher (COI	mical Oxygen Demand D)	:	No data available	9

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	BOD/C	OD	: 1	No data available	
	ThOD		: 1	No data available	
	BOD/T	hOD	: 1	No data available	
	Dissolv (DOC)	ed organic carbon	: 1	No data available	
	Physico remova	o-chemical ability	: 1	No data available	
	Stability	y in water	: 1	No data available	
	Photod	egradation	: 1	No data available	
	Impact Treatm	on Sewage ent	: 1	No data available	
	Bioacc	umulative potential			
	Compo	onents:		_	
	4,4'-me Bioacci	ethylenebis[N-sec-buty umulation	anilin : E	e]: Bioconcentration f	actor (BCF): 4,700
	melami Bioacci	ne: umulation	: E	Bioconcentration f	actor (BCF): 0.05
	ethylbe Bioacci	nzene: umulation	: E	Bioconcentration f	actor (BCF): 1.9
	Compo tris(me Partitio octanol	onents: thylphenyl) phosphate: n coefficient: n- /water	: 10	og Pow: 5.93	
	4,4'-me Partitio octanol	thylenebis[N-sec-buty n coefficient: n- /water	anilin : Io N	e] <b>:</b> og Pow: 6.08 Method: QSAR	
	1,1',1'', Partitio octanol	1'''-ethylenedinitrilotetra n coefficient: n- /water	apropa : l	an-2-ol <b>:</b> og Pow: -2.08 (77	″ °F / 25 °C)
	melami Partitio octanol	ne: n coefficient: n- /water	:  4 F N	og Pow: -1.22 (68 bH: 8 Method: Partition (	s °F / 20 °C) coefficient
	ethylbe Partitio octanol	nzene: n coefficient: n- /water	: 10	og Pow: 3.15	



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Versic 1.4	n Revision Date: 03/14/2019	SDS Number: 400001010057	Date of last issue: 10/24/2017 Date of first issue: 09/22/2015
N	lobility	: No data ava	lable
C tr D e 4	omponents: is(methylphenyl) phosphate: istribution among nvironmental compartments ,4'-methylenebis[N-sec-butyla	: Koc: 4.31 Method: OE( aniline]:	CD Test Guideline 121
e	nvironmental compartments	Method: QS	AR
m D e e	nelamine: istribution among nvironmental compartments thvlbenzene:	: Koc: 1.7	
D e S	istribution among nvironmental compartments tability in soil	: Koc: 520 : No data ava	lable
С	ther adverse effects		
E	nvironmental fate and athways	: No data ava	lable
R a	esults of PBT and vPvB ssessment	: No data ava	lable
E p	ndocrine disrupting otential	: No data ava	lable
A h	dsorbed organic bound alogens (AOX)	: No data ava	lable
н	azardous to the ozone lave	r	
C	zone-Depletion Potential	: Regulation: 4 Protection of Substances Remarks: Th manufacture U.S. Clean A B).	40 CFR Protection of Environment; Part 82 Stratospheric Ozone - CAA Section 602 Class I his product neither contains, nor was d with a Class I or Class II ODS as defined by the hir Act Section 602 (40 CFR 82, Subpt. A, App.A +
A ir	dditional ecological formation - Product	: An environm unprofessior Very toxic to	ental hazard cannot be excluded in the event of al handling or disposal. aquatic life with long lasting effects.
G ((	lobal warming potential	: No data ava	lable

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

#### **Disposal methods** Waste from residues

: The product should not be allowed to enter drains, water

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		courses or the so Do not contamina chemical or used Send to a license Dispose of as ha national regulatio Dispose of conte plant.	vil. ate ponds, waterways or ditches with container. ad waste management company. zardous waste in compliance with local and ons. nts/ container to an approved waste disposal
Conta	minated packaging	: Empty remaining Dispose of as un Do not re-use em	contents. used product. ipty containers.

#### **SECTION 14. TRANSPORT INFORMATION**

#### International Regulations

ΙΑΤΑ		
UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (DIETHYL METHYLENE DIANILINE, TRICRESYL PHOSPHATE)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
IMDG		
UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
		(DIETHYL METHYLENE DIANILINE, TRICRESYL PHOSPHATE)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes
Transport in bulk according	to /	Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### **National Regulations**

DOT	Classification
	olussilloution

UN/ID/NA number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

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Version	Revision Date:	SD	S Number:	Date of last issue: 10/24/2017
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Class Packing Labels ERG Co Marine Remark	g group ode pollutant ks	: :	N.O.S. (DIETHYL METH PHOSPHATE) 9 III CLASS 9 171 yes(DIETHYL ME Shipment by grou may be shipped p facilitate multi-mo	THYLENE DIANILINE, TRICRESYL THYLENE DIANILINE) nd under DOT is non-regulated; however it er the applicable hazard classification to dal transport involving ICAO (IATA) or IMO.

#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

#### EPCRA - Emergency Planning and Community Right-to-Know Act

#### **CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
xylenes	1330-20-7	100	30959
ethylbenzene	100-41-4	1000	*
methanol	67-56-1	5000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards	<ul> <li>Hazards : Acute toxicity (any route Respiratory or skin sensi Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxi</li> </ul>		ute of exposure) ensitisation ty toxicity (single or repe	of exposure) itisation icity (single or repeated exposure)	
SARA 313	:	The following component of the following component of the second	nents are subject to re Title III, Section 313:	porting levels	
		ethylbenzene	100-41-4	>= 0.1 - < 1 %	

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

#### California Prop. 65

WARNING: This product can expose you to chemicals including ethylbenzene, which is/are known to the State of California to cause cancer, and methanol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

#### The components of this product are reported in the following inventories:

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DSL		: This product conta Canadian NDSL.	ains one or several components listed in the
AICS		: On the inventory,	or in compliance with the inventory
NZIoC		: On the inventory,	or in compliance with the inventory
ENCS		: On the inventory,	or in compliance with the inventory
PICCS		: On the inventory,	or in compliance with the inventory
IECSC		: On the inventory,	or in compliance with the inventory
TCSI		: On the inventory,	or in compliance with the inventory
TSCA		: On the inventory,	or in compliance with the inventory

#### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

#### TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

# US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.

#### **SECTION 16. OTHER INFORMATION**





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ACGI OSHA	H BEI A Z-1	: ACGIH - Biolo : USA. Occupat Limits for Air 0	gical Exposure Indices (BEI) ional Exposure Limits (OSHA) - Table Z-1 Contaminants		
US WEEL		: USA. Workpla	: USA. Workplace Environmental Exposure Levels (WEEL)		
ACGIH / TWA		: 8-hour, time-weighted average			
OSHA Z-1 / TWA		: 8-hour time we	8-hour time weighted average		
US WEEL / TWA		: 8-hr TWA	8-hr TWA		

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

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