



GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS): TOLUENE

FLAMMABLE LIQUIDS (CATEGORY 2),H225

SKIN IRRITATION (CATEGORY 2),H315

REPRODUCTIVE TOXICITY (CATEGORY 2),H361

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE-(CATEGORY 3),CENTRAL NERVOUS SYSTEM,H336

SPECIFIC TARGET ORGAN TOXICITY-REPEATED EXPOSURE (CATEGORY 2),H373

ASPIRATION HAZARD (CATEGORY 1),H304

ACUTE AQUATIC TOXICITY (CATEGORY 2),H401

GHS CLASSIFICATION:DIBUTYLTIN DILAUATE

OSHA HAZARDS: HIGHLY TOXIC BY INHALATION,TOXIC BY INGESTION, SKIN SENSITISER, IRRITANT

TARGET ORGANS: GASTROINTESTINAL TRACT, LIVER, NERVES

GHS CLASSIFICATION:DIBUTYLTIN DILAUATE

ACUTE TOXICITY,ORAL (CATEGORY 3)

ACUTE TOXICITY,INHALATION (CATEGORY 1)

ACUTE TOXICITY,DERMAL (CATEGORY 5)

SKIN IRRITATION (CATEGORY 2)

EYE IRRITATION (CATEGORY 2A)

SKIN SENSITIZATION (CATEGORY 1)

ACUTE AQUATIC TOXICITY (CATEGORY 1)

SUBSTANCE % by weight in the product	H&P STATEMENTS	CAS	EINECS/ELINCS
ETHYL SILICATE <10%	H226, H315, H319, H332, H335 P210,P233,P240,P241,P242 P243,P261,P264,P271,P280 P303+P361+P353,P304+P340 P305+P351+P338,P312,P321 P332+P313,P337+P313,P362 P370+P378,P403+P233,P403+ P235,P405,P501	78-10-4	201-083-8
TOLUENE (Methylbenzene) < 87%	H225,H304,H315,H319,H332,H336, H361,H371,H401, P210P260,P281,P301+P310,P305+ P351+ P338,P331	108-88-3	203-625-9
DIBUTYLTIN DILAUATE <5%	H301,H313,H315,H317,H319 H330,H400 P260,P273,P280,P284,P305+ P351+P338,P310	77-58-7	201-039-8

**Section -4. FIRST-AID MEASURES**

**General:** When in doubt or symptoms persist, seek medical attention. Have Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove to fresh air, if breathing has stopped, administer artificial respiration. Give nothing by mouth, seek immediate medical attention.

**Eye contact:** Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek medical attention.

**Skin contact:** Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use aromatic solvents, thinners or petroleum products.

**Ingestion:** If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

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**Section -5. FIRE-FIGHTING MEASURES**

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**Extinguishing agents**

**Recommended:** Universal resistant foam, CO<sub>2</sub>, water, powder.

**Agents to avoid:** None known

**Attention**

Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.

Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.

Do not weld, flame cut or expose to extreme heat or ignition sources, empty containers which have contained flammable products.

Do not allow run-off from fire fighting to enter drains or water courses.

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**Section -6. ACCIDENTAL RELEASE MEASURES**

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Eliminate sources of ignition, ventilate the area. Avoid breathing vapors by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8.

Collect spill with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see section 13). Do not allow to enter drains or watercourses.

Clean-up with a detergent/ water mix ; avoid use of aromatic solvents. If the product enters drains or watercourses, inform authority with jurisdiction in accordance with state / local regulations.

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**Section -7. HANDLING AND STORAGE**

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**7.1 Handling:**

No smoking, eating and drinking during handling.

Keep containers tightly closed. Prior to movement containers which are opened should be carefully resealed.

Avoid skin and eye contact. Avoid inhalation in case of exposure to vapor and spray mist.

Handle and open containers with care to avoid spilling of contents. Never use pressure to empty; container is not a pressure vessel. Clean or discard contaminated clothing and shoes.

Preparation may charge electrostatically; always use grounding/ bonding/ earthing leads when transferring contents of containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive.

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air, and avoid vapor concentration higher than the Occupational Exposure Limits.

Use in areas from which local sources of ignition have been excluded. Electrical equipment including lighting should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools are recommended.

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**7.2 Storage:**

Observe label precautions. Store between 32/F and 95/F ( 0/C and 35/C ) in a dry, clean and well ventilated place, away from sources of heat, ignition, and direct sunlight. For flash points below 23 °C store in an area constructed to the appropriate standard

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**8.1 Engineering measures:**

Avoid the inhalation of vapors, spray mist and particulates. Achieve by local exhaust ventilation providing good general extraction as to keep air-borne concentration below the Occupational Exposure Limits (OEL).

If local / area ventilation is not sufficient to comply with OEL, suitable (NIOSH) respiratory protection to be provided. Always provide suitable (NIOSH) respiratory protection when sanding, grinding or otherwise abrading cured material.

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## 8.2 Exposure limits

### Work place exposure limits ( 8 hour )

Substance	OSHA	ACGIH TWA
ETHYL SILICATE *	100PPM	10PPM
TOLUENE (Methylbenzene)*	100 ppm	50 ppm
DIBUTYLTIN DILAURATE *	0.1mg m <sup>3</sup>	0.1mg m <sup>3</sup>
* can be absorbed through skin		

## 8.3 Personal protection

All Personal Protective Equipment, including Respiratory Protection, used to control exposure to hazardous substances must be selected to meet the requirements of OSHA Regulations.

### Respiratory protection :

Appropriate respiratory protection equipment should be selected according to the type of contaminants, following regulatory (OSHA / NIOSH) and manufacturers instructions including proper fitting of devices.

### Hand protection :

For prolonged or repeated contact, recommend gloves type: polyvinyl alcohol, nitrile rubber, latex rubber (some people may exhibit sensitivity to Latex). Barrier creams may help to protect exposed areas of the skin. However, they should not be applied post exposure.

### Eye protection :

Use safety glasses with side shields to protect against splashes. Face shields may also be worn.

### Skin protection :

Protective clothing made of antistatic and fire resistant fibers. All parts of the body should be washed after contact. Use good hygiene and industrial practices, keep working clothes clean.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at: 68 ° F (20 ° C) Liquid
- Flash point: 40 ° F Method: TCC
- Specific gravity at: 68 ° F (20 ° C) 0.90 g/cm<sup>3</sup>
- Vapor Density: 3.2
- Lower Explosive Limit (% vol.): 1.4 (toluene)
- Upper Explosive Limit (% vol.): 7.4 (toluene)
- Miscibility in water at 20 ° C: Slight
- Ph : 6.5
- Volatile by Volume % : 90%
- Vapor pressure at: 68 ° F (20 ° C) 20 mm Hg
- Color: Off white to white
- Appearance: Liquid
- Odor: Aromatic Ester Odor
- Boiling Point: >230° F

## 10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see SDS section 7). In case of combustion, may produce hazardous decomposition products such as :

- Carbon monoxide
  - Sulfur oxides
- Oxides of Carbon, Ethanol, Smoke, Soot, Tin Fumes

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**11. TOXICOLOGICAL INFORMATION**

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There are no data available on the preparation itself. See (SDS Sections 3 and 15) for details.

Exposure to component solvents vapors at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases loss of consciousness.

Repeated or prolonged contact with the preparation may cause Defatting of the skin resulting in non-allergic dermatitis and absorption through the skin.

The liquid splashed in the eyes may cause irritation and damage.

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**12. ECOLOGICAL INFORMATION**

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There is no data available on the preparation itself. Do not allow the product to enter drains or water ways. See (SDS Sections 3 and 15)

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**13. DISPOSAL CONSIDERATIONS**

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Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.

React with base and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.

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**14. TRANSPORT INFORMATION**

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**DOT: § 172.101 HAZARDOUS MATERIALS TABLE**

UN Number: 1263

Proper Shipping Name: Paint Related Material

Labels: Flammable Liquid

Hazard Class: 3 Subclass: NO

Packaging Group: II

Limited Quantity: Passenger aircraft: 10 Liter (2.64 Gallons)

Cargo aircraft only: 220 Liter (58 gallon)

Vessel stowage: A

ERG: 128

**NMFC 4620 sub.5-CL.60**

Schedule B # 3506.91.0000

**Schedule B # 3506.91.0000**

IATA:

UN Number: 1263

Proper Shipping Name: Paint Related Material

Labels: Flammable Liquid

Hazard Class: 3 Subclass: NO

Packaging Group: II

Passenger Air Packing Instruction : 355

Passenger aircraft: 60 Liter (16 gallon)

Cargo Air Packing Instruction : 366

Cargo aircraft only: 220 Liter (58 gallon)

IMDG:

**UN Number: 1263**

Proper Shipping Name: Paint Related Material

Label: 3

Hazard Class: 3 Subclass: NO

Packaging Group: II

EMS No: F, E – S, D

**15. REGULATORY INFORMATION**

**US Regulations Federal**

chemical (s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 (SARA)	Chemical Name	CAS No	Weight %	Threshold limit
	TOLUENE (Methylbenzene)	108-88-3	<87%	1.0%
	ETHYL SILICATE	78-10-4	<10%	Unknown
	DIBUTYLTIN DILAURATE	77-58-7	<5%	UNKNOWN

All remaining Constituents are non-hazardous per FED-STD-313 All Constituents are listed in TSCA inventory; complete mixture is excluded Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

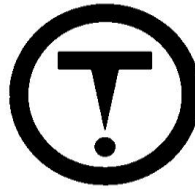
**US Regulations State**

California Proposition 65 (Developmental – Female)	TOLUENE	108-88-3	<87%	unknown
Massachusetts	TOLUENE	108-88-3	<87%	unknown
New Jersey	TOLUENE	108-88-3	<87%	unknown
Pennsylvania	TOLUENE	108-88-3	<87%	unknown
Rhode Island	TOLUENE	108-88-3	<87%	unknown
California Proposition 65 (Developmental – Female)	TETRAETHYL SILICATE	78-10-4	<10%	unknown
Massachusetts	TETRAETHYL SILICATE	78-10-4	<10%	unknown
New Jersey	TETRAETHYL SILICATE	78-10-4	<10%	unknown
Pennsylvania	TETRAETHYL SILICATE	78-10-4	<10%	unknown
Rhode Island	TETRAETHYL SILICATE	78-10-4	<10%	unknown
California Proposition 65 (Developmental – Female)	DIBUTYLTIN DILAURATE	77-58-7	<5%	unknown
Massachusetts	DIBUTYLTIN DILAURATE	77-58-7	<5%	unknown
New Jersey	DIBUTYLTIN DILAURATE	77-58-7	<5%	unknown
Pennsylvania	DIBUTYLTIN DILAURATE	77-58-7	<5%	unknown
Rhode Island	DIBUTYLTIN DILAURATE	77-58-7	<5%	unknown

**Canada**



**Class B – Flammable**  
TOLUENE  
TETRA ETHYL SILICATE



**Class D - Poisonous and Infectious**  
**materials Division 2: Materials Causing**  
**Other Toxic Effects D2A TOLUENE**  
Dibutyltin Dilaurate cas#77-58-7  
Tetra Ethyl Silicate cas#78-10-4 D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

Listed National Pollutant Release Inventory (NPRI):TOLUENE CAS:108-88-3

TETRA ETHYL SILICATE CAS#78-10-4

Dibutyltin Dilaurate cas#77-58-7

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**16. OTHER INFORMATION**

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**NFPA****HMIS****PPE**

Full text of P statements with N<sup>o</sup> associated to this compound:

- P101+P102+P103: If medical advice is needed, have product container or label at hand. Keep out of reach of children.
- Read label before use
- P202: Do not handle until all safety precautions have been read and understood
- P210: Keep away from heat/sparks/open flames and hot surfaces-No Smoking
- P240:Ground/bond container and receiving equipment
- P261+P262+P263+P264:Avoid breathing dust/fumes/gas/mist/vapours/spray.Do not get in eyes , on skin, or on clothing. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling.
- P270+P271+P273: Do not eat drink or smoke when using this product. Use only outdoors or in a well ventilated area. Avoid release to the environment.
- P281+P280: Use personal protective equipment as required. Wear protective gloves/ protective clothing/ eye protection/face protection
- P301+P310+P331: If swallowed: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.
- P305+P351+P338+P315: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses,if present and easy to do. Continue rinsing. Get immediate medical advice attention.
- P304+P340+P314: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell
- P342+P340+P315: If experiencing respiratory symptoms: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
- P302+P352: If on skin: Wash with plenty of soap and water
- P306+P361: If on clothing: Remove/ take off immediately all contaminated clothing
- P402+P403+P404: Store in a dry place. Store in a well ventilated space. Store in a closed container.
- P233+P234+P235: Keep container tightly closed. Keep only in original container. Keep cool.

**Full text of H statements with N<sup>o</sup> appearing in Section 3:**

- H412: Harmful to aquatic life with long lasting effects
- H360Fd: May damage fertility. Suspected of damaging the unborn child.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation
- H336: May cause drowsiness or dizziness
- H318: Causes serious eye damage
- H302+H332: Harmful if swallowed. Harmful if inhaled
- H340+H350: May cause genetic defects. May cause cancer.
- H225: Highly flammable liquid and vapor.

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Preparer:	Flamemaster / Compliance Rev-A June/09/2010 Supersedes (conversion)	Revision Notes: A	Conversion to ANSI format
Containers:	plastic jars, metal cans cartridge kits		
Limited Quantity	See SDS Section 14		
Maximum container size	50 Gallons / 190 Liters		

**End of Safety Data Sheet**