

ENHANCE PLUS SEALER

Hazard Alert Code:
HIGHChemwatch Material Safety Data Sheet (Conforms to
Regulation (EC) No 1907/2006) (REVIEW)
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Chemwatch 6594-40

CD 2007/2

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ENHANCE PLUS SEALER**SUPPLIER**

Company: Dry-Treat

Company: Dry-Treat

Address:

Address:

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PRODUCT USE






Water and stain protection for masonry substrate.

SYNONYMS

"stain prevention", "masonry sealant"

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE**CONSIDERED A DANGEROUS SUBSTANCE ACCORDING TO DIRECTIVE 1999/45/EC AND ITS AMENDMENTS.****HAZARD RATINGS**

	Min	Max
Flammability:	3	
Toxicity:	0	
Body Contact:	0	
Reactivity:	1	
Chronic:	0	

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

**POTENTIAL HEALTH EFFECTS**

ACUTE HEALTH EFFECTS

SWALLOWED

The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

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).

SKIN

The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives .

INHALED

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	INT HAZ	%
silicone			>60
titanium(IV) butoxide EC NO: 227-006-8 R CODES: R34, R41, R65	5593-70-4	C	0.1-1
octamethylcyclotetrasiloxane EC NO: 209-136-7 R CODES: R53, R62	556-67-2	Xn	0.1-1
other ingredients not contributing to the classification			10-30

Section 4 - FIRST AID MEASURES

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

If this product comes in contact with eyes:

- 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

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES**EXTINGUISHING MEDIA**

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

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- Fight fire from a safe distance, with adequate cover.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control the fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- 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.

FIRE/EXPLOSION HAZARD

- Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat, flame and/or oxidisers.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include: carbon dioxide (CO₂).

carbon monoxide (CO), silicon dioxide (SiO₂), other pyrolysis products typical of burning organic

material.

FIRE INCOMPATIBILITY

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

PERSONAL PROTECTION

Glasses:

Chemical goggles.

Gloves:

General purpose rubber glove.

Respirator:

Type A Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

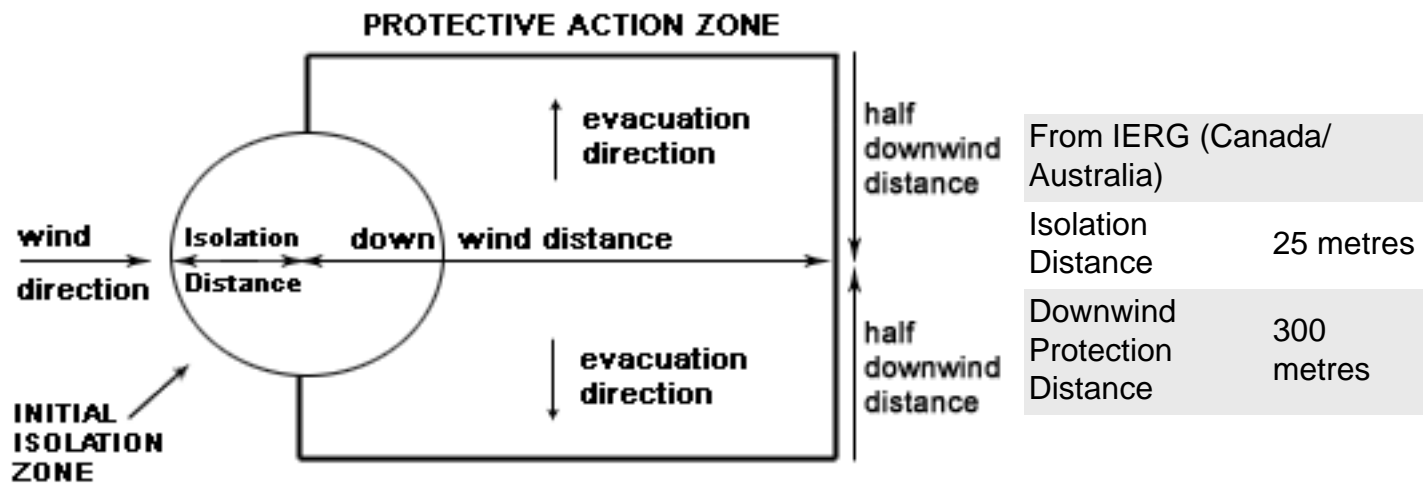
MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb small quantities with vermiculite or other absorbent material.
- Wipe up.
- Collect residues in a flammable waste container.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Water spray or fog may be used to disperse /absorb vapour.
- Contain spill with sand, earth or vermiculite.
- Use only spark-free shovels and explosion proof equipment.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

PROTECTIVE ACTIONS FOR SPILL



FOOTNOTES

1 PROTECTIVE ACTION ZONE is defined as the area in which people are at risk of harmful exposure. This zone assumes that random changes in wind direction confines the vapour plume to an area within 30 degrees on either side of the predominant wind direction, resulting in a crosswind protective action distance equal to the downwind protective action distance.

2 PROTECTIVE ACTIONS should be initiated to the extent possible, beginning with those closest to the spill and working away from the site in the downwind direction. Within the protective action zone a level of vapour concentration may exist resulting in nearly all unprotected persons becoming incapacitated and unable to take protective action and/or incurring serious or irreversible health effects.

3 INITIAL ISOLATION ZONE is determined as an area, including upwind of the incident, within which a high probability of localised wind reversal may expose nearly all persons without appropriate protection to life-threatening concentrations of the material.

4 SMALL SPILLS involve a leaking package of 200 litres (55 US gallons) or less, such as a drum (jerrican or box with inner containers). Larger packages leaking less than 200 litres and compressed gas leaking from a small cylinder are also considered "small spills". LARGE SPILLS involve many small leaking packages or a leaking package of greater than 200 litres, such as a cargo tank, portable tank or a "one-tonne" compressed gas cylinder.

5 Guide 128 is taken from the US DOT emergency response guide book.

6 IERG information is derived from CANUTEC - Transport Canada.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



X: Must not be stored together

O: May be stored together with specific preventions

+: May be stored together

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- 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.
- Avoid smoking, naked lights, heat or ignition sources.
- When handling, DO NOT eat, drink or smoke.
- Vapour may ignite on pumping or pouring due to static electricity.
- DO NOT use plastic buckets.
- Earth and secure metal containers when dispensing or pouring product.
- Use spark-free tools when handling.
- Avoid contact with incompatible materials.
- Keep containers securely sealed.
- 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.

SUITABLE CONTAINER

- Packing as supplied by manufacturer.
 - Plastic containers may only be used if approved for flammable liquid.
 - Check that containers are clearly labelled and free from leaks.
 - For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type.
(ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.
 - For materials with a viscosity of at least 2680 cSt. (23 deg. C)
 - For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)
 - Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C)
- (i) : Removable head packaging;
(ii) : Cans with friction closures and
(iii) : low pressure tubes and cartridges may be used.
- Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages
 - In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.

STORAGE INCOMPATIBILITY

Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.

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

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- titanium(IV) butoxide: CAS:5593-70-4
- octamethylcyclotetrasiloxane: CAS:556-67-2

MATERIAL DATA

Not available. Refer to individual constituents.

INGREDIENT DATA

OCTAMETHYLCYCLOTETRASILOXANE:

TITANIUM(IV) BUTOXIDE:

No exposure limits set by NOHSC or ACGIH.

OCTAMETHYLCYCLOTETRASILOXANE:

CEL TWA: 5 ppm, 60 mg/m³ [GE Silicones]

CEL TWA: 10 ppm, 120 mg/m³ [Dow Corning]

PERSONAL PROTECTION



EYE

- 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 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]

HANDS/FEET

Suitability and durability of glove type is dependent on usage. Factors such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity,

are important in the selection of gloves.

Wear general protective gloves, eg. light weight rubber gloves.

OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Ensure there is ready access to a safety shower.

RESPIRATOR

Respiratory protection is required when ANY "Worst Case" vapour-phase concentration is exceeded (see Computer Prediction in "Exposure Standards").

Protection Factor (Min)	Half-Face Respirator	Full-Face Respirator
10 x ES	A-AUS	-
	A-PAPR-AUS	-
50 x ES	-	A-AUS
	-	A-PAPR-AUS
100 x ES	-	A-2
	-	A-PAPR-2

^ - Full-face.

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

For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents

2: Contaminants of low toxicity or of nuisance value only.

2: Contaminants of high toxicity

3: Intermittent, low production.

3: High production, heavy use

4: Large hood or large air mass in motion

4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Molecular Weight: Not Applicable

Boiling Range (°C): Not Available

Melting Range (°C): Not Available

Specific Gravity (water=1): 0.98

Solubility in water (g/L): Partly Miscible

pH (as supplied): Not Applicable

pH (1% solution): Not Available

Vapour Pressure (kPa): Not Available

Volatile Component (%vol): Not Available

Evaporation Rate: Not Available

Relative Vapour Density (air=1): Not Available

Flash Point (°C): 10

Lower Explosive Limit (%): Not Available

Upper Explosive Limit (%): Not Available

Autoignition Temp (°C): Not Available

Decomposition Temp (°C): Not Available

State: LIQUID

Viscosity: Not Available

APPEARANCE

Highly flammable liquid with a characteristic odour; partly mixes with water.

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

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

Section 11 - TOXICOLOGICAL INFORMATION

Enhance Plus Sealer

TOXICITY AND IRRITATION

Not available. Refer to individual constituents.

TITANIUM(IV) BUTOXIDE:

TOXICITY	IRRITATION
Oral (rat) LD50: 3122 mg/kg	Nil Reported
Intravenous (mouse) LD50: 180 mg/kg	

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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.

The material may produce respiratory tract irritation. Symptoms of pulmonary irritation may include coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and a burning sensation. Unlike most organs, the lung can respond to a chemical insult or a chemical agent, by first removing or neutralising the irritant and then repairing the damage (inflammation of the lungs may be a consequence).

The repair process (which initially developed to protect mammalian lungs from foreign matter and antigens) may, however, cause further damage to the lungs (fibrosis for example) when activated by hazardous chemicals. Often, this results in an impairment of gas exchange, the primary function of the lungs. Therefore prolonged exposure to respiratory irritants may cause sustained breathing difficulties.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

TOXICITY	IRRITATION
OCTAMETHYLCYCLOTETRASILOXANE:	
Oral (rat) LD50: 1540 mg/kg	Skin (rabbit): 500 mg/24h - Mild
Inhalation (rat) LC50: 36000 mg/m ³ /4h	Eye (rabbit): 500 mg/24h - Mild
Inhalation (rat) TClO: 700 ppm/6H/4W-I	
Dermal (rabbit) LD50: 794 uL/kg	

MATERIAL	CARCINOGEN	MUTAGEN	REPROTOXIN	SENSITISER	SKIN
octamethylcyclotetrasiloxane			ATP:Repr. Cat. 3		

REPROTOXIN

ATP: European Union (EU) List of Dangerous Substances (Annex I) -
up to the 29th ATP: octamethylcyclotetrasiloxane Category: Repr.
Cat. 3; R62;R53

Section 12 - ECOLOGICAL INFORMATION

Marine Pollutant:Not Determined

No data for Enhance Plus Sealer.

Refer to data for ingredients, which follows:

TITANIUM(IV) BUTOXIDE:

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

DO NOT discharge into sewer or waterways.

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: Burial in a licenced land-fill or Incineration in a licenced apparatus (after admixture with suitable combustible material).
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

According to the European Waste Catalogue, Waste Codes are not product specific but application specific. Waste Codes should be assigned by the User based on the application in which the product is used.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE LIQUID

Land transport ADR/RID (cross-border):

ADR/RID Class:	3	Hazard identification (Kemler):	33
UN Number:	1993	Packing Group:	II
Classification Code:	F1	Hazard Label:	3

Shipping name:FLAMMABLE LIQUID, N.O.S.
(contains silicone)

Air Transport IATA:

ICAO/IATA Class:	3	ICAO/IATA Subrisk:	None
UN/ID Number:	1993	Packing Group:	II
ERG Code:	3H		

Shipping name:FLAMMABLE LIQUID, N.O.S.
(contains silicone)

Maritime Transport IMDG:

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1993	Packing Group:	II
EMS Number:	F-E,S-E	Marine Pollutant:	Not Determined

Shipping name: FLAMMABLE LIQUID, N.O.S.
(contains silicone)

Section 15 - REGULATORY INFORMATION



ANNEX 1

Ingredient	Annex 1 67/548/EEC
octamethylcyclotetrasiloxane	014-018-00-1

RISK

Risk Codes	Risk Phrases
R11	Highly flammable.

SAFETY

Safety Codes	Safety Phrases
S16	Keep away from sources of ignition. No smoking.
S09	Keep container in a well ventilated place.
S53	Avoid exposure - obtain special instructions before use.
S29	Do not empty into drains.
S60	This material and its container must be disposed of as hazardous waste.

ANNEX 2: Indications of Danger

F	Highly Flammable
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REGULATIONS

titanium(IV) butoxide (CAS: 5593- 70- 4) is found on the following regulatory lists;

European Customs Inventory of Chemical Substances (English)

European Inventory of Existing Commercial Substances - EINECS

European Union (EU) Restrictions on the Marketing and Use of Certain Dangerous Substances and Preparations

OECD Representative List of High Production Volume (HPV) Chemicals

octamethylcyclotetrasiloxane (CAS: 556- 67- 2) is found on the following regulatory lists;

European Customs Inventory of Chemical Substances (English)

European Inventory of Existing Commercial Substances - EINECS

European Union (EU) List of Dangerous Substances (Annex I) - up to the 29th ATP

European Union (EU) Teratogenic Substances

International Council of Chemical Associations (ICCA) - High Production Volume List

OECD Representative List of High Production Volume (HPV) Chemicals

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

Cumulative effects may result following exposure*.

May possibly affect fertility*.

* (limited evidence).

RISK**Explanation of Risk Codes used in the Ingredient Table**

Risk Codes	Risk Phrases
R34	Causes burns.
R41	Risk of serious damage to eyes.
R53	May cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.
R65	HARMFUL-May cause lung damage if swallowed.

ANNEX 2: Indications of Danger

C	Corrosive
Xn	Harmful

EXPOSURE STANDARD FOR MIXTURES

"Worst Case" computer-aided prediction of vapour components/concentrations: Composite Exposure Standard for Mixture (TWA) (mg/m³): 60 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 Zone mg/m³ Mixture Conc: (%).

Component	Breathing zone (ppm)	Breathing Zone (mg/m ³)	Mixture Conc (%)
octamethylcyclotetrasiloxane	5.00	60.0000	1.0

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/m³): 1 mg/m³

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