

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : HARDENER FOR POLYESTERS

Product code : PH0333/00

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses : Paint or paint related material.
: Industrial use only.

1.3 Details of the supplier of the safety data sheet

SHERWIN-WILLIAMS Italy S.r.l.

Via del Fifico, 12 - 40065 Pianoro (BO)

Italia - C.P. 18

Cod. Fisc. e Reg. Impr. Bo 08866930152

e-mail address of person responsible for this SDS : regulatory.SWI@sherwin.com

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : 0844 892 0111

Supplier

Telephone number : +39 051 770511

Hours of operation : Emergency contact available 24 hours a day

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226

Org. Perox. D, H242

Acute Tox. 4, H302

Acute Tox. 4, H332

Skin Corr. 1B, H314

Eye Dam. 1, H318

Skin Sens. 1, H317

Muta. 2, H341

Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : O; R7
Muta. Cat. 3; R68
Xn; R20/22
C; R34
R43
R52/53

HARDENER FOR POLYESTERS

PH0333/00

SECTION 2: Hazards identification

- Physical/chemical hazards** : May cause fire.
- Human health hazards** : Possible risk of irreversible effects. Harmful by inhalation and if swallowed. Causes burns. May cause sensitization by skin contact.
- Environmental hazards** : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: Flammable liquid and vapor.
Heating may cause a fire.
Harmful if swallowed or if inhaled.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Obtain special instructions before use. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Keep away from clothing, incompatible materials and combustible materials. Keep only in original container. Avoid release to the environment.

Response

: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or physician. IF IN EYES: Immediately call a POISON CENTER or physician.

Storage

: Protect from sunlight. Store at temperatures not exceeding @%1 °C/@%2 °F. Keep cool. Store away from other materials.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients

: Methyl Ethyl Ketone Peroxide
1,1-Dimethylethyl Hydroperoxide

Supplemental label elements

: FOR INDUSTRIAL USE ONLY

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

Special packaging requirements

Not applicable.

Biocidal products regulation

2.3 Other hazards

HARDENER FOR POLYESTERS

PH0333/00

SECTION 2: Hazards identification

Other hazards which do not result in classification : Temperature control may be required. Hazardous decomposition may occur.

SECTION 3: Composition/information on ingredients

3.2 Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Dimethyl Phthalate	REACH #: 01-2119437229-36 EC: 205-011-6 CAS: 131-11-3 Index: ID917	>=35 - <50	Not classified.	Not classified.	[2]
Methyl Ethyl Ketone Peroxide	REACH #: 01-2119514691-43 EC: 215-661-2 CAS: 1338-23-4 Index: ID670	>=25 - <35	O; R7 Xn; R22 C; R34	Org. Perox. D, H242 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318	[1] [2]
Diacetone Alcohol	REACH #: 01-2119473975-21 EC: 204-626-7 CAS: 123-42-2 Index: 603-016-00-1	>=10 - <15	Xi; R36	Eye Irrit. 2, H319	[1] [2]
1,1-Dimethylethyl Hydroperoxide	REACH #: 01-2119446670-40 EC: 200-915-7 CAS: 75-91-2	>=10 - <20	R7, R10 Muta. Cat. 3; R68 T; R23 Xn; R21/22 C; R34 R43 N; R51/53	Flam. Liq. 3, H226 Org. Perox. C, H242 Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Aquatic Chronic 2, H411	[1]
			See Section 16 for the full text of the R-phrases declared above.	See Section 16 for the full text of the H statements declared above.	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General

: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

Eye contact

: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

SECTION 4: First aid measures

- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. Wash clothing before reuse.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains tert-butyl hydroperoxide. May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, carbon dioxide, powders.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Fire will produce dense black smoke. CAUTION: May re-ignite itself after fire is extinguished. Material supports combustion. In case of fire and/or explosion do not breathe fumes. Exposure to decomposition products may cause a health hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.
- Special protective equipment for fire-fighters** : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8.

Keep unnecessary and unprotected personnel from entering.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up

: Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The waste should NOT be confined. Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

: Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or watercourses. Avoid confinement. Do not allow to dry out. Avoid shock and friction. Explosive when dry.

Information on fire and explosion protection

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Use explosion-proof electrical (ventilating and lighting) equipment.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapors in all cases. In such circumstances, they should wear a compressed-air-fed respirator during the spraying process and until the particulate and solvent vapor concentrations have fallen below the exposure limits.

HARDENER FOR POLYESTERS

PH0333/00

SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations.

Notes on joint storage

Keep away from reducing agents, heavy metal compounds and alkaline and acidic materials.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorized access.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep only in the original container.

Contaminated absorbent material may pose the same hazard as the spilled product.

Store above 5°C (42°F) Protect from frost.

Seveso II Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b	5000	50000
P6b: Self-reactive substances Type C to F, or Organic peroxides Type C to F	50	200
C3: Oxidizing	50	200

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

Good housekeeping standards, regular safe removal of waste materials and regular maintenance of spray booth filters will minimise the risks of spontaneous combustion and other fire hazards.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Dimethyl Phthalate	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 10 mg/m ³ 15 minutes. TWA: 5 mg/m ³ 8 hours.
Methyl Ethyl Ketone Peroxide	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 1.5 mg/m ³ 15 minutes. STEL: 0.2 ppm 15 minutes.
Diacetone Alcohol	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 362 mg/m ³ 15 minutes. STEL: 75 ppm 15 minutes. TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.

SECTION 8: Exposure controls/personal protection

- Recommended monitoring procedures** :
- If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
 - Regular monitoring of all work areas should be carried out at all times, including areas that may not be equally ventilated.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

- Appropriate engineering controls** :
- Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn. Use explosion-proof ventilation equipment.
 - Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Individual protection measures

- Hygiene measures** :
- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- Eye/face protection** :
- Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection

Gloves

- Wear suitable gloves tested to EN374.
- Short Term Exposure less than 10 minutes Continuous use Nitrile gloves. Long Term Exposure Spill / For prolonged or repeated handling, use PE / PE Laminate gloves > 8 hours (breakthrough time) .
- There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
- The breakthrough time must be greater than the end use time of the product.
- The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
- Gloves should be replaced regularly and if there is any sign of damage to the glove material.
- Always ensure that gloves are free from defects and that they are stored and used correctly.
- The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.
- Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
- The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

SECTION 8: Exposure controls/personal protection

- Body protection** : Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers. Wash clothing before reuse.
- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Recommended: A2P2 (EN14387). Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls** : Do not allow to enter drains or watercourses.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : None
- Odor threshold** : Not available.
- pH** : Testing not technically possible.
- Melting point/freezing point** : Not Available (Not Tested).
- Initial boiling point and boiling range** : 100°C
- Flash point** : Closed cup: 60°C [Pensky-Martens Closed Cup]
- Evaporation rate** : 0.12 (butyl acetate = 1)
- Flammability (solid, gas)** : Not Available (Not Tested).
- Burning time** : Not Available (Not Tested).
- Burning rate** : Not Available (Not Tested).
- Upper/lower flammability or explosive limits** : Lower: 1.8%
Upper: 6.9%
- Vapor pressure** : 0.31 kPa [at 20°C]
- Vapor density** : 1 [Air = 1]
- Relative density** : 1.1
- Solubility(ies)** : Not Available (Not Tested).
- Solubility in water** : Not Available (Not Tested).
- Partition coefficient: n-octanol/ water** : Not Available (Not Tested).
- Auto-ignition temperature** : Not Available (Not Tested).
- Decomposition temperature** : Not Available (Not Tested).

HARDENER FOR POLYESTERS

PH0333/00

SECTION 9: Physical and chemical properties

Viscosity : Kinematic (room temperature): >0.205 cm²/s
Kinematic (40°C): >0.205 cm²/s

Explosive properties

Oxidizing properties : Under normal conditions of storage and use, hazardous reactions will not occur.

9.2 Other information

Heat of combustion : 0.00003934 kJ/g

SECTION 10: Stability and reactivity

10.1 Reactivity : This product, in laboratory testing, either detonates partially, deflagrates slowly or shows a medium effect when heated under confinement.

10.2 Chemical stability : Hazardous reactions or instability may occur under certain conditions of storage or use.

10.3 Possibility of hazardous reactions : Hazardous reactions or instability may occur under certain conditions of storage or use.
Conditions may include the following:
temperature increase
high temperature
Reactions may include the following:
hazardous decomposition
risk of causing fire

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.
SADT (Self-Accelerating Decomposition Temperature) is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used for transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at or above the SADT. Contact with incompatible substances can cause decomposition at or below the SADT.
Avoid shock and friction.

10.5 Incompatible materials : Keep away from rust, iron and copper. Contact with incompatible materials, such as acids, alkalis, heavy metal compounds and reducing agents, will result in hazardous decomposition. Do not mix with peroxide accelerators.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

HARDENER FOR POLYESTERS

PH0333/00

SECTION 11: Toxicological information

Contains tert-butyl hydroperoxide. May produce an allergic reaction.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Methyl Ethyl Ketone Peroxide	LC50 Inhalation Gas.	Rat	200 ppm	4 hours
	LC50 Inhalation Vapor	Rat	3600 mg/m ³	4 hours
	LD50 Oral	Rat	1017 mg/kg	-
Diacetone Alcohol	LD50 Dermal	Rabbit	13500 mg/kg	-
	LD50 Oral	Rat	2520 mg/kg	-
1,1-Dimethylethyl Hydroperoxide	LC50 Inhalation Gas.	Rat	500 ppm	4 hours
	LC50 Inhalation Vapor	Rat	1800 mg/m ³	4 hours
	LD50 Dermal	Rat	790 mg/kg	-
	LD50 Oral	Rat	370 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	1937.6 mg/kg
Dermal	7900 mg/kg
Inhalation (vapors)	18 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Diacetone Alcohol	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
1,1-Dimethylethyl Hydroperoxide	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	70 microliters	-
	Eyes - Severe irritant	Rabbit	-	1 minutes 150 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.**Sensitization**

No data available

Conclusion/Summary : Not available.**Mutagenicity**

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity (single exposure)

HARDENER FOR POLYESTERS

PH0333/00

SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
No data available			

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
No data available			

Aspiration hazard

Product/ingredient name	Result
No data available	

Other information : Not available.**SECTION 12: Ecological information****12.1 Toxicity**

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
Diacetone Alcohol	Acute LC50 420000 µg/l Marine water	Fish - Menidia beryllina	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
No data available				

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
No data available			

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
No data available			

12.4 Mobility in soil**Soil/water partition coefficient (K_{oc})** : Not available.**Mobility** : Not available.**12.5 Results of PBT and vPvB assessment****PBT** : Not applicable.**vPvB** : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.
: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC) : waste paint and varnish containing organic solvents or other dangerous substances 08 01 11*

Disposal considerations : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

European waste catalogue (EWC) : packaging containing residues of or contaminated by dangerous substances 15 01 10*

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN3105	UN3105	UN3105
14.2 UN proper shipping name	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl Ethyl Ketone Peroxide)	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl Ethyl Ketone Peroxide)	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl Ethyl Ketone Peroxide)
14.3 Transport Hazard Class(es)/ Label(s)	5.2 	5.2 	5.2 
14.4 Packing group	II	II	II
14.5 Environmental hazards	No.	No.	No.

HARDENER FOR POLYESTERS

PH0333/00

SECTION 14: Transport information

Additional information	Tunnel code D	Emergency schedules (EmS) F-J, S-R	Special provisions Not Applicable
-------------------------------	-------------------------	--	---

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)**Annex XIV - List of substances subject to authorization****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

European Directive 2004/42/EC : Exclusively for uses non-regulated by directive 2004/42/EC

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
1,1-Dimethylethyl Hydroperoxide	-	Muta. 2, H341	-	-

Seveso II Directive

This product is controlled under the Seveso II Directive.

Danger criteria

Category
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b P6b: Self-reactive substances Type C to F, or Organic peroxides Type C to F C3: Oxidizing

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

International regulations

HARDENER FOR POLYESTERS

PH0333/00

SECTION 15: Regulatory information

15.2 Chemical Safety Assessment

: This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 vPvB = Very Persistent and Very Bioaccumulative

Key literature references and sources for data

: Regulation (EC) No. 1272/2008 [CLP]
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 DPD = Dangerous Preparations Directive [1999/45/EC]
 DSD = Dangerous Substances Directive [67/548/EEC]
 IATA = International Air Transport Association
 IMDG = International Maritime Dangerous Goods
 Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 453/2010
 Directive 96/82/EC, and relative amendments & additions
 Directive 2008/98/EC, and relative amendments & additions
 Directive 2000/39/EC, and relative amendments & additions
 CEPE Guidelines

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Org. Perox. D, H242	Expert judgment
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H332	Calculation method
Skin Corr. 1B, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Muta. 2, H341	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

: H226 Flammable liquid and vapor.
 H242 Heating may cause a fire.
 H302 (oral) Harmful if swallowed.
 H311 (dermal) Toxic in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H330 Fatal if inhaled.
 (inhalation)
 H332 Harmful if inhaled.
 (inhalation)
 H341 Suspected of causing genetic defects.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.

HARDENER FOR POLYESTERS

PH0333/00

SECTION 16: Other information

Full text of classifications [CLP/GHS] :

Acute Tox. 2, H330	ACUTE TOXICITY (inhalation) - Category 2
Acute Tox. 3, H311	ACUTE TOXICITY (dermal) - Category 3
Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Aquatic Chronic 2, H411	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 3, H412	AQUATIC HAZARD (LONG-TERM) - Category 3
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Muta. 2, H341	GERM CELL MUTAGENICITY - Category 2
Org. Perox. C, H242	ORGANIC PEROXIDES - Type C
Org. Perox. D, H242	ORGANIC PEROXIDES - Type D
Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C, H314	SKIN CORROSION/IRRITATION - Category 1C
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1

Full text of abbreviated R phrases :

- R7- May cause fire.
- R10- Flammable.
- R68- Possible risk of irreversible effects.
- R23- Toxic by inhalation.
- R22- Harmful if swallowed.
- R20/22- Harmful by inhalation and if swallowed.
- R21/22- Harmful in contact with skin and if swallowed.
- R34- Causes burns.
- R36- Irritating to eyes.
- R43- May cause sensitization by skin contact.
- R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD] :

- O - Oxidizing
- Muta. Cat. 3 - Mutagen category 3
- T - Toxic
- C - Corrosive
- Xn - Harmful
- Xi - Irritant
- N - Dangerous for the environment

Date of printing : 08, May, 2015.

Date of issue/ Date of revision : 08, May, 2015.

Date of previous issue : 20, Apr, 2015.

: If there is no previous validation date please contact your supplier for more information.

Version : 1.01

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other

HARDENER FOR POLYESTERS

PH0333/00

SECTION 16: Other information

source.