

SAFETY DATA SHEET

Safety Data Sheet according to regulation (EC) No 1907/2006 & 1272/2008 and amendments

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 PRODUCT IDENTIFIER **VIAPAL™ VUP 4627 BEMT/56**

Product Description: unsaturated polyester emits small quantities of styrene pre-accel., extra-stabil., thixotropic

Unique Formula Identifier (UFI) P1Y4-D08M-H00U-JT59

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Intended/Recommended Use: Binder

Uses advised against: This product should not be used in any consumer applications.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: Allnex Belgium SA/NV, Anderlechtstraat, 33, 1620 Drogenbos, BE.

For Product and all Non-Emergency Information call your local Allnex contact point or contact us at <http://www.allnex.com/contact>

Local Contact Information: Allnex Belgium SA/NV, Anderlechtstraat, 33, 1620 Drogenbos, BE
Telephone no.: +32 (0) 2-3345111

1.4 EMERGENCY TELEPHONE NUMBER

EMERGENCY TELEPHONE NUMBER (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:

Europe

+44 (0) 1235 239 670 (Carechem 24)

Middle East, Africa

+44 (0) 1235 239 671 (Carechem 24)

See Section 16 for Emergency phone numbers for other regions.

Trademarks indicated with ® , TM or * as well as the allnex name and logo are registered, unregistered or pending trademarks of Allnex Netherlands BV or its directly or indirectly affiliated allnex Group companies.

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008 and amendments

Flammable Liquid Hazard Category 3

Toxic To Reproduction Hazard Category 2

Specific Target Organ Toxicity (STOT) - Repeated Exposure Hazard Category 1

Specific Target Organ Toxicity (STOT) - Single Exposure Hazard Category 3
Skin Corrosion / Irritation Hazard Category 2
Serious Eye Damage / Eye Irritation Hazard Category 2
Skin Sensitizer Hazard Category 1A
Aquatic Environment Long-term Hazard Category 3

2.2 LABEL ELEMENTS



Signal Word

Danger

Hazard Statements

H226 - Flammable liquid and vapour.
H361d - Suspected of damaging the unborn child.
H372 - Causes damage to organs through prolonged or repeated exposure.
H335 - May cause respiratory irritation.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H317 - May cause an allergic skin reaction.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements

Precautionary statements on the label will be reduced as indicated in Regulation (EC) No 1272/2008, Article 28.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P201 - Obtain special instructions before use.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash face, hands and any exposed 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 should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P370 + P378 - In case of fire: Use CO₂, dry chemical, or foam to extinguish.
P308 + P313 - IF exposed or concerned: Get medical advice/attention.
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P403 + P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as

applicable.

2.3 OTHER HAZARDS

Polymerisation may occur from excessive heat, contamination or exposure to direct sunlight.

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

ENDOCRINE DISRUPTOR INFORMATION

Endocrine disrupting - health:

Not applicable

Endocrine disrupting - environment:

Not applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

3.2 MIXTURES

Component / CAS No.	%	EC-No	REACH Registration Number	Classification according to Regulation (EC) No. 1272/2008 [CLP]	EU - CLP EUH Codes
Styrene 100-42-5	42 - 46	202-851-5	01-2119457861-32	Flam. Liq. 3 (H226) D Repr. 2 (H361d) D Acute Tox. 4 (H332) D STOT RE 1 (H372) D STOT Single 3 (H335) D Skin Irrit. 2 (H315) D Eye Irrit. 2 (H319) D Asp. Tox. 1 (H304) D Aquatic Chronic 3 (H412) D	
Cobalt bis(2-ethylhexanoate) 136-52-7	< 0.2	205-250-6	01-2119524678-29	Repr. 1B (H360Df) Eye Irrit. 2 (H319) Skin Sens. 1A (H317) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)	
Phthalic anhydride 85-44-9	< 0.1	201-607-5	01-2119457017-41	Acute Tox. 4 (H302) STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) Skin Sens. 1A (H317)	
Maleic anhydride 108-31-6	< 0.02	203-571-6	01-2119472428-31	Acute Tox. 4 (H302) STOT RE 1 (H372) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) Skin Sens. 1A (H317)	EUH071

Component / CAS No.	REACH SVHC	M-Factor	CLP Specific Concentration Limits	CLP Acute Toxicity Estimates (ATEs)
Maleic anhydride 108-31-6			Skin Sens. 1A H317 C>=0.001%	

See Section 16 for full text of H phrases.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Eye Contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin Contact:

Wash immediately with plenty of water and soap. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Get medical attention if irritation develops and persists. Wash off immediately with soap and plenty of water for at least 15 minutes.

Ingestion:

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a doctor.

Inhalation:

Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Itching. Rashes. Hives. Burning sensation.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Notes To Physician:

May cause sensitisation in susceptible persons. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Extinguishing Media:

Use water spray, alcohol-resistant foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

Unsuitable Extinguishing Media:

full water jet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

May be ignited by heat, sparks or flames. In case of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Thermal decomposition can lead to release of irritating and toxic gases and vapours. Flammable. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Keep product and empty container away from heat and sources of ignition. Product is or contains a sensitizer. Keep containers cool by spraying with water if exposed to fire.

5.3 ADVICE FOR FIREFIGHTERS

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See SDS Section 8 (Exposure Controls/Personal Protection).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

6.2 ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water. Remove sources of ignition.

6.4 REFERENCE TO OTHER SECTIONS

See Sections 7, 8 and 13 for additional information.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Precautions: Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and other equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye/face protection. Wash hands thoroughly after handling. Avoid release to the environment. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors or spray mist.

Special Handling Statements: Provide good ventilation of working area (local exhaust ventilation if necessary). During processing and handling of the product, comply with the indicative occupational exposure limit values. Avoid excessive heat, contamination or exposure to direct sunlight to prevent polymerization. Containers must be bonded and grounded when pouring or transferring material.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in a cool, dry, well ventilated place and keep container tightly closed. Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material's flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed. Keep away from sources of ignition - refrain from smoking. Avoid flammable gas mixtures. Take precautionary measures against electrostatic loading - earthing necessary during loading operations. Vapours may form explosive mixtures with air.

Storage Temperature: Store at < 25 °C

Reason: Higher storage temperature reduces shelf life and also increases risk of hazardous polymerization.

Storage Class (TRGS 510): 3

7.3 SPECIFIC END USE(S)

Refer to Section 1 or Exposure Scenario if applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

100-42-5 Styrene

United Kingdom: WEL (Workplace Exposure Limits)	100 ppm (TWA) 430 mg/m ³ (TWA) 250 ppm (STEL) 1080 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	Not established

136-52-7 Cobalt bis(2-ethylhexanoate)

United Kingdom: WEL (Workplace Exposure Limits)	0.1 mg/m ³ Co (TWA) 0.3 mg/m ³ Co (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	Not established

108-31-6 Maleic anhydride

United Kingdom: WEL (Workplace Exposure Limits)	1 mg/m ³ (TWA) 3 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	Not established

Biological Exposure Limit(s)

100-42-5 Styrene

Biological Exposure Indices	150 mg/g creatinine (urine - end of shift)
(ACGIH)	20 µg/L (urine - end of shift)

Derived No Effect Level (DNEL): Styrene (100-42-5)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	289	mg/m ³	Short term, systemic
Worker	inhalation	306	mg/m ³	Short term, local
Worker	inhalation	85	mg/m ³	Long term, systemic
Consumer	inhalation	174.25	mg/m ³	Short term, systemic
Consumer	inhalation	182.75	mg/m ³	Short term, local
Consumer	inhalation	10.2	mg/m ³	Long term, systemic
Worker	Dermal	406	mg/kg/day	Long term, systemic
Consumer	Oral	2.1	mg/kg/day	Long term, systemic
Consumer	Dermal	343	mg/kg/day	Long term, systemic

Cobalt bis(2-ethylhexanoate) (136-52-7)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	235.1	µg/m ³	Long term, local
General Population	inhalation	37	µg/m ³	Long term, local
General Population	Oral	175	µg/kg/day	Long term, systemic

Phthalic anhydride (85-44-9)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	49.4	mg/m ³	Long term, systemic
Worker	Dermal	14	mg/kg/day	Long term, systemic
General Population	inhalation	8.7	mg/m ³	Long term, systemic
General Population	Dermal	5	mg/kg/day	Long term, systemic
General Population	Oral	5	mg/kg/day	Long term, systemic
General Population	Oral	25	mg/kg/day	Short term, systemic

Maleic anhydride (108-31-6)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	0.081	mg/m ³	Long term, systemic
Worker	inhalation	0.081	mg/m ³	Long term, local
Worker	inhalation	0.2	mg/m ³	Short term, systemic
Worker	inhalation	0.2	mg/m ³	Short term, local

Predicted No Effect Concentration (PNEC):**Styrene (100-42-5)**

Compartment	PNEC	Units
Fresh water	0.028	mg/l
Marine water	0.014	mg/l
Intermittent water release	0.04	mg/l
Sediment (fresh water)	0.614	mg/kg
Sediment (marine water)	0.307	mg/kg
Sewage treatment plant	5	mg/l
Soil	0.2	mg/kg

Cobalt bis(2-ethylhexanoate) (136-52-7)

Compartment	PNEC	Units
Fresh water	0.62	µg/L
Marine water	2.36	µg/L
Sewage treatment plant	0.37	mg/l
Sediment (fresh water)	53.8	mg/kg
Sediment (marine water)	69.8	mg/kg
Soil	10.9	mg/kg

Phthalic anhydride (85-44-9)

Compartment	PNEC	Units
Fresh water	1	mg/l
Marine water	0.1	mg/l
Sewage treatment plant	10	mg/l
Sediment (fresh water)	3.8	mg/kg
Sediment (marine water)	0.38	mg/kg
Soil	0.173	mg/kg

Maleic anhydride (108-31-6)

Compartment	PNEC	Units
Fresh water	0.038	mg/l
Marine water	0.0038	mg/l
Sediment (fresh water)	0.296	mg/kg
Sediment (marine water)	0.0296	mg/kg
Soil	0.037	mg/kg
Sewage treatment plant	44.6	mg/l

8.2 EXPOSURE CONTROLS**Engineering Measures:**

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

Respiratory Protection:

For operations where inhalation exposure can occur use an approved respirator. Recommendations are listed below. Other protective respiratory equipment may be used based on user's own risk assessment.

Recommended:

Full Face Mask with organic vapor cartridge, Type A filter (BP >65°C)

Eye protection:

Wear eye/face protection such as chemical splash proof goggles or face shield.

Eyewash equipment and safety shower should be provided in areas of potential exposure.

Skin Protection:

Avoid skin contact.

Wear impermeable gloves and suitable protective clothing.

Barrier creams may be used in conjunction with the gloves to provide additional skin protection.

Hand protection:

Wear protective gloves. Recommendations are listed below. Other protective materials may be used based on user's own risk assessment. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility etc.) is noticed.

The selected protective gloves have to satisfy the specifications of EU Regulation (EC) 2016/425 and standard EN ISO 374-1:2016.

Gloves for repeated or prolonged exposure - non exhaustive list:

Viton®/Butyl rubber, thickness: 0.7 mm, break through time: > 480 min

Gloves for short term exposure/splash protection - non exhaustive list:

Nitrile rubber (NBR), thickness: 0.38 mm, break through time: up to 60 min

The chemical resistance depends on the type of product and amount of product on the glove. Therefore gloves need to be changed when in contact with chemicals.

Not suitable gloves - non exhaustive list:

Latex gloves

Nitrile rubber (NBR), thickness: 0.12 mm

Natural rubber (NRL), thickness: 0.12 mm

Neoprene rubber (NE), thickness: 0.40 mm

Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

Environmental Protection:

See section 6.2.

Formulation & (re)packing of substances and mixtures

Control of worker exposure

Process Category	PROC1 - Use in closed process, no likelihood of exposure
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Operation carried out for < 8 hours Clear spills immediately. Handle substance within a predominantly closed system provided with extract ventilation. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 80%. Use suitable eye protection.

Process Category	PROC3 - Use in closed batch process (synthesis or formulation)
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Operation carried out for < 8 hours Clear spills immediately. Handle substance within a closed system. With local exhaust ventilation Effectiveness: 90%. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) . Provide extract ventilation to points where emissions occur. Drain down and flush system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or for subsequent recycle. Wear a respirator conforming to EN140 with type A/P2 filter or better. Effectiveness: 95%. Wear suitable gloves (tested to EN374) and eye protection. Effectiveness: 80%.

Process Category	PROC8b - Transfer of substance or preparation (charging/discharging) from/to
-------------------------	--

	vessels/large containers at dedicated facilities
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Operation carried out for < 8 hours Clear spills immediately. With local exhaust ventilation Effectiveness: 90%. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) . Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 95%. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training. Use suitable eye protection.
Process Category	PROC15 - Use as laboratory reagent
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Operation carried out for < 8 hours Clear spills immediately. With local exhaust ventilation Effectiveness: 90%. Handle in a fume cupboard or under extract ventilation. Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 95%. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 80%. Use suitable eye protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Structurally viscous
Colour:	blue
Odor:	styrene
Odor Threshold:	See Section 8 for exposure limits.
Melting Point:	Not available
Boiling Point:	100 - 200 °C
Flammability:	Not available
Flammable Limits (% By Vol):	Lower: 1.1 Upper: 6.1 (values for solvent)
Flash point:	~ 34 °C DIN EN ISO 1523
Autoignition temperature:	Not available
Decomposition Temperature:	Not available
pH:	Not available
Viscosity (Kinematic):	Not available
Viscosity (Dynamic):	Not available
Solubility In Water:	Insoluble
Solubility In Solvent:	Not available
Partition coefficient n-octanol/water (log value):	Not available
Vapor Pressure:	6.5 hPa @ 20 °C (value for solvent)
Specific Gravity/Density:	~ 1.06 g/cm ³ @ 20 °C DIN EN ISO 2811-2
Vapour density:	Not available
Particle characteristics:	Not applicable

9.2 OTHER INFORMATION

9.2.1 Information with regard to physical hazard classes

Not applicable

9.2.2 Other safety characteristics

Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY No information available

10.2 CHEMICAL STABILITY Stable

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Polymerization: May occur

Conditions To Avoid: Avoid contact with oxidizing agents, free radical initiators. Keep away from heat sources and direct sunlight.

10.4 CONDITIONS TO AVOID Avoid excessively high temperatures and contact with alkalis or strong oxidizing agents.

10.5 INCOMPATIBLE MATERIALS Peroxides, metallic compounds, strong oxidizing agents

10.6 HAZARDOUS DECOMPOSITION PRODUCTS Irritant gases/vapours.
Carbon dioxide
Carbon monoxide (CO)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON HAZARD CLASSES AS DEFINED IN Regulation (EC) No 1272/2008

Likely Routes of Exposure: Oral, Skin, Eyes, Respiratory System.

Acute toxicity - oral: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - dermal: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - inhalation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin corrosion / irritation: Causes skin irritation

Serious eye damage / eye irritation: Causes serious eye irritation

Respiratory sensitization: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin sensitization: May cause an allergic skin reaction

Carcinogenicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Germ cell mutagenicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Reproductive toxicity: Suspected of damaging the unborn child .

Specific target organ toxicity (STOT) - single exposure: May cause respiratory irritation.

Route of Exposure: inhalation **Affected Organs:** Respiratory System

Specific target organ toxicity (STOT) - repeated exposure: Causes damage to organs through prolonged or repeated exposure.

Route of Exposure: inhalation **Affected Organs:** Ears

Aspiration hazard: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

PRODUCT TOXICITY INFORMATION

ACUTE TOXICITY DATA

oral	rat	Acute LD50	> 2000	mg/kg
dermal	rabbit	Acute LD50	> 2000	mg/kg
inhalation	rat	Acute LC50	4 hr	> 20 mg/l (Vapors)

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	Irritating
Acute Irritation	eye	Irritating

ALLERGIC SENSITIZATION

Sensitization	Skin	Severe Sensitizing
Sensitization	respiratory	No data

SUBACUTE/SUBCHRONIC TOXICITY

oral (gavage)	rat	No data
dermal	rat	No data

Specific target organ toxicity (repeated exposure): Causes damage to ears through prolonged or repeated exposure by inhalation.

GENOTOXICITY**Assays for Gene Mutations**

Ames Salmonella Assay No data

OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Styrene has acute oral LD50 (rat) and acute dermal LD50 (rat, rabbit) values of >5000 and >2000 mg/kg, respectively. The inhalation LC50 (rat) has been reported as 11.8 mg/L (vapor) following a 4-hour exposure. Acute overexposure to styrene vapor may cause moderate eye and nasal irritation as well as drowsiness, headache and central nervous system depression. Styrene is a moderate skin irritant. No allergic reactions were observed in animal studies. In animal studies, styrene induced micronuclei, sister chromatid exchanges and DNA strand breaks. In vitro tests showed styrene to cause sex-linked recessive lethal mutations in *Drosophila* (fruit flies). Styrene has been shown to cause lung tumors in mice. Epidemiological studies of styrene exposure in humans are not conclusive due to the inadequate control of variables. Causes damage to ears through prolonged or repeated exposure by inhalation. Ingestion of styrene can initiate an aspiration hazard. The International Agency for Research on Cancer (IARC) lists styrene as an IARC 2B carcinogen (possibly carcinogenic to humans). Animal studies have shown some adverse developmental effects.

Cobalt 2-ethylhexanoate has an oral (rat) LD50 of 3129 mg/kg of body weight in female rats with an approx. 95% confidence interval of 1750 mg/kg (lower) to 5000 mg/kg (upper). The dermal (rabbit) LD50 is estimated > 2000 mg/kg. Cobalt 2-ethylhexanoate is irritating to eyes. Repeated or prolonged contact with cobalt compounds can cause dermal sensitization or photosensitized dermatitis. Suspected of damaging fertility impairment in males. Skeletal malformations were observed in a prenatal developmental toxicity study. Occupational exposure to cobalt compounds (ingestion or inhalation) can cause systemic toxic effects, including cardiomyopathy and peripheral neuritis.

Phthalic anhydride has acute oral (rat) and a dermal (rabbit) LD50 values of 1530 mg/kg and >10,000 mg/kg, respectively. The acute inhalation (rat) 4-hrs LC50 is > 2.14 mg/L air (above saturation limit). Direct contact with this material may cause severe eye irritation with conjunctivitis and burns; and moderate skin irritation (skin burns may occur if skin is moist/wet). Inhalation of vapor, fume or dusts may cause eye and respiratory tract irritation/burns, and may cause bronchitis and bloody nasal discharge. Repeated exposures may cause dermal and/or respiratory sensitization. Swallowing can cause severe burns of the mouth, throat and stomach. In a series of NTP genetic toxicology assays, this material was negative for chromosome aberrations, negative for sister chromatid exchanges, positive in the mouse lymphoma assay and negative in the Ames evidence of carcinogenicity in male or female rats.

and mice. In mice, teratogenic effects of phthalic anhydride occurred at doses near the maternally toxic range.

Acute overexposure to maleic anhydride vapors may cause severe eye, nasal and respiratory irritation. Repeated exposure to the vapor may cause lung disease as well as respiratory or skin sensitization. The oral (rat) and dermal (rabbit) LD50 values are 1090 mg/kg and 2620 mg/kg, respectively. The 1 hour inhalation LC50-value was > 4.35 mg/L in a rat study. Repeated exposure may lead to damage to the respiratory tract or kidneys. Clastogenic effects were seen during an in vitro study (ambiguous results), but the in vivo follow up study didn't confirm these findings. No carcinogen or teratogenic effects are expected.

11.2 INFORMATION ON OTHER HAZARDS

Endocrine disrupting properties:

for more information see sections 2-Other hazards and 11-Hazardous ingredient toxicity data in this Safety Data Sheet.

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

Aquatic Chronic Toxicity: Harmful to aquatic life with long lasting effects

The ecological assessment for this material is based on an evaluation of its components.

12.1 TOXICITY

Not available

12.2 PERSISTENCE AND DEGRADABILITY

Not available

12.3 BIOACCUMULATIVE POTENTIAL

Not available

12.4 MOBILITY IN SOIL

Not available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

12.6 ENDOCRINE DISRUPTING PROPERTIES

No Hazardous Ingredients

12.7 OTHER ADVERSE EFFECTS

Not available

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Fish
Styrene (100-42-5)	LC50 = 3.24 - 4.99 mg/L - Pimephales promelas (96h)

Cobalt bis(2-ethylhexanoate) (136-52-7)	LC50 = 1.5 mg/L of Co - Onchorhynchus mykiss - 96hrs EC10 = 0.35mg/L of Co - Pimephales promelas - 34d
Phthalic anhydride (85-44-9)	LC50 = 560 mg/L - Brachydanio rerio - 7d NOEC = 10 mg/L - Onchorhynchus mykiss - 60d
Maleic anhydride (108-31-6)	LC50 = 75 mg/L - Lepomis macrochirus (96hrs) LC50 = 75 mg/L - Onchorhynchus mykiss (96hrs)

Component / CAS No.	Toxicity to Water Flea
Styrene (100-42-5)	EC50 = 4.7 mg/L - Daphnia magna (48h) NOEC = 1.01 mg/L - Daphnia magna (21d) LC50 = 9.5 mg/L - Hyalella azteca (96h)
Cobalt bis(2-ethylhexanoate) (136-52-7)	EC50 = 0.61 mg/L of Co - cladoceran, Ceriodaphnia dubia - 48hrs EC10 = 7.55 µg/L of Co - Daphnia magna - 21d
Phthalic anhydride (85-44-9)	EC50 > 640 mg/L - Daphnia magna - 48hrs NOEC = 16 mg/L - Daphnia magna - 21d
Maleic anhydride (108-31-6)	EC50 = 42.81 mg/L - Daphnia magna (48hrs) NOEC = 10 mg/L - Daphnia magna (21d)

Component / CAS No.	Toxicity to Algae
Styrene (100-42-5)	EC50 = 6.3 mg/L - Pseudokirchneriella subcapitata (96h)
Cobalt bis(2-ethylhexanoate) (136-52-7)	EC50 = 52 µg/L of Co - Lemna minor - 72hrs EC 10 = 10.4 µg/L of Co - Lemna minor - 72hrs
Phthalic anhydride (85-44-9)	EC50 > 100 mg/L - Desmodesmus subspicatus - 72hrs
Maleic anhydride (108-31-6)	EC50 = 74.32 mg/L - Pseudokirchneriella subcapitata (72hrs) EC10 = 11.8 mg/L - Pseudokirchnerella subcapitata (72hrs)

Component / CAS No.	Partition coefficient
Styrene (100-42-5)	2.96
Cobalt bis(2-ethylhexanoate) (136-52-7)	Not available
Phthalic anhydride (85-44-9)	1.6
Maleic anhydride (108-31-6)	log Kow = -2.16 (corresponding acid)

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

The company encourages the recycle and reuse of products and packaging, where possible and permitted.

Product disposal

When recycle or reuse is not possible, the company recommends that our products, especially when classified as hazardous, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed. For disposal within the European Community, waste codes according to Directive 2008/98/EC should be assigned by the user based on the application for which the product was used.

Packaging disposal

Handle contaminated packages in the same way as the product itself. Disposal of emptied and cleaned packaging must be made in accordance with applicable local and national regulations.

Disposal-relevant information

Do not release directly or indirectly to surface water, ground water, soil or public sewage system.

SECTION 14: TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

SUBSECTION 14.1 TO 14.5

ADR/RID/ADN

Dangerous Goods? X
UN Number: UN1866
UN PROPER SHIPPING NAME: RESIN SOLUTION, flammable
Transport Hazard Class: 3
Transport Label Required: Flammable liquid
Packing Group: III
Shipped under Exception: Carriage in accordance with 2.2.3.1.5.1
Tunnel restriction code: D/E
Comments: Not intended for shipment by inland waterways in tank vessels.

IMO

Dangerous Goods? X
UN Number: UN1866
UN PROPER SHIPPING NAME: RESIN SOLUTION, flammable
Transport Hazard Class: 3
Transport Label Required: Flammable liquid
Packing Group: III

ICAO / IATA

Dangerous Goods? X
UN Number: UN1866
UN PROPER SHIPPING NAME: RESIN SOLUTION
Transport Hazard Class: 3
Transport Label Required: Flammable liquid
Packing Group: III

14.6 SPECIAL PRECAUTIONS FOR USER

By Multi-cambers-trucks also hold neighbour chambers <50°C! Protect against external heat sources above +35°C.

14.7 MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

No information available

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Ozone Depleting Substances (Regulation (EC) No 1005/2009): Not applicable

Persistent Organic Pollutants (Regulation (EU) No 2019/1021): Not applicable

Prior Informed Consent (Regulation (EC) No 689/2008): Not applicable

Substances subject to Authorization (Annex XIV of Regulation (EC) No 1907/2006): Not applicable

Substances subject to Restrictions for certain applications(Annex XVII of Regulation(EC)No 1907/2006): Yes
Refer to Annex XVII of REACH for details of the restricted applications.

Styrene (42 - 46 %)

This substance is a flammable restricted for aerosols under item 40.

Water Endangering Class (Germany): 2 according to AwSV, 18.04.2017

Inventory Information

European Economic Area (including EU): When purchased and shipped from an Allnex legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt and/or registered.

United States (USA): All components of this product are designated as “Active” on the TSCA Inventory or are not required to be listed.

Canada: One or more components of this product are NOT included on the Canadian Domestic Substances List (DSL). These components are included on the Canadian Non-Domestic Substances List (NDSL).

Australia: One or more components of this product have NOT yet been included in the Australian Inventory of Industrial Chemicals (AIIC) or assessed by AICIS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: One or more components of this product are NOT included on the Japanese (ENCS and/or ISHL) inventories.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory. When purchased from Allnex Korea or Chemart distributor this product is compliant with the ARECs (the Act on the Registration and Evaluation, etc. of Chemical Substances). All its components are either excluded, exempt, pre-notified and/or registered. When purchased from another allnex entity, please contact PSRA-KREACH@allnex.com to check the possibility to be covered by our Only Representative.

Philippines: One or more components of this product are NOT included on the Philippine (PICCS) inventory.

Taiwan: All components of this product are included in the Taiwan chemical substance inventory or are not required to be listed on the Taiwan chemical substance inventory (TCSI).

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 24-26).

15.2 CHEMICAL SAFETY ASSESSMENT

No Chemical Safety Assessment has been carried out.

SECTION 16: OTHER INFORMATION

Reasons for Issue: Revised Section 8
Revised Section 16

Date Prepared: 17-Mar-2025

Date of last significant revision: 06-Mar-2022

Classification methods include one or more of the following: use of specific product data, read-across data, modeling, professional judgment or a component based evaluation.

Component - Hazard Statements

Styrene

H226 - Flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

H361d - Suspected of damaging the unborn child.

H372 - Causes damage to organs through prolonged or repeated exposure.

H412 - Harmful to aquatic life with long lasting effects.

Cobalt bis(2-ethylhexanoate)

H360Df - May damage the unborn child. Suspected of damaging fertility.

H319 - Causes serious eye irritation.

H317 - May cause an allergic skin reaction.

H400 - Very toxic to aquatic life.

H412 - Harmful to aquatic life with long lasting effects.

Phthalic anhydride

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 - May cause respiratory irritation.

Maleic anhydride

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H372 - Causes damage to organs through prolonged or repeated exposure.

Uses covered for this mixture under REACH Consolidated from the exposure scenarios of the substances present in this mixture						
No.	Short Title	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Risk Management Measures/ Operational Conditions (RMM/OC)
1	Formulation & (re)packing of substances and mixtures	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites		PROC1 PROC3 PROC8b PROC15	ERC2 ERC6c	Included in Section 8 of this SDS
2	Industrial application of coatings and inks	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites		PROC3	ERC6a ERC6d	Available on request*

* Contact ALLNEX (PSRA-customer-requests@allnex.com) for detailed Exposure Scenario information on the substances present in this mixture.

Emergency phone numbers for other regions

Asia Pacific

Australia: 1800 074 234 (toll free) or +61 2 8014 4558 (Carechem 24)

China (PRC): +86 532 8388 9090 (NRCC)

India: 000 800 100 7479 (toll free) or +65 3158 1198 (Carechem 24)

Indonesia: 007 803 011 0293 (Carechem 24)

Japan: 0120 015 230 (toll free) (Carechem24)

Korea: +82 2 3479 8401 (Carechem 24)

Malaysia: +60 3 6207 4347 (Carechem 24)

New Zealand: 0800 446 881 (toll free) or +64 9 929 1483 (Carechem 24)

Philippines: +63 2 231 2149 (Carechem 24)

Taiwan: +886 2 8793 3212 (Carechem 24)

Vietnam: +84 8 4458 2388 (Carechem 24)

All Others: +65 3158 1074 (Carechem 24)

Latin America

Brazil: +55-800-707-7022 (toll free) or +55-11-98149-0850 (Suatrans 24)

Chile: +56 2 2582 9336 (Carechem 24)

Mexico and all others: +52-555-004-8763 (Carechem 24)

USA

+1-866-928-0789 (toll free) or +1-215-207-0061 (Carechem 24 - Allnex29003-NCEC)

Canada

+1-800-579-7421 (toll free) or +1-215-207-0061 (Carechem 24)

Prepared By: Product Sustainability & Regulatory Affairs Department, <http://www.allnex.com/contact>

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation, and verification. Before using any product, read its label.
