



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 **RESYDROL® AX 237W/70BG LIQUID COATING RESINS**

Product Description: Resin solution

Unique Formula Identifier (UFI) U9D0-J0G2-100C-ETXW

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

Intended/Recommended Use: Binder

Uses advised against: -

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: Tennants Distribution Limited, Hazelbottom Road, Cheetham, Manchester. M8 0GR

For Product and all Non-Emergency Information call +44(0)161 205 4454

1.4 EMERGENCY TELEPHONE NUMBER

EMERGENCY TELEPHONE NUMBER (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call: +44(0)844 335 0001

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SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

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

Acute Toxicity (Inhalation) Hazard Category 3

Skin Corrosion / Irritation Hazard Category 2

Serious Eye Damage / Eye Irritation Hazard Category 2

2.2 LABEL ELEMENTS



Signal Word

Danger

Hazard Statements

H331 - Toxic if inhaled.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

Precautionary Statements

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

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 - Use only outdoors or in a well-ventilated area.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P311 - Call a POISON CENTER or doctor/physician.

P321 - Specific treatment (see supplemental first aid instructions on this label).

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.

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.

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

2.3 OTHER HAZARDS

When driers such as cobalt salts are added, air oxidation of the resin or materials contaminated with the resins may cause spontaneous ignition. To avoid spontaneous ignition prevent residue buildup; store overspray wastes, spray booth filters and other contaminated materials in a water filled container.

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
2-Butoxyethanol 111-76-2	26.5 - 30.5	203-905-0	01-2119475108-36	Acute Tox. 4 (H302) Acute Tox. 3 (H331) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	
Styrene 100-42-5	< 0.9	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	
Acrylic acid 79-10-7	< 0.3	201-177-9	01-2119452449-31	Flam. Liq. 3 (H226) D Acute Tox. 4 (H302) D Acute Tox. 4 (H312) D Acute Tox. 4 (H332) D STOT Single 3 (H335) D Skin Corr. 1A (H314) D Eye Dam. 1 (H318) D Aquatic Acute 1 (H400) D Aquatic Chronic 2 (H411) D	

Component / CAS No.	REACH SVHC	M-Factor	CLP Specific Concentration Limits	CLP Acute Toxicity Estimates (ATEs)
2-Butoxyethanol 111-76-2				Oral ATE 1200 mg/kg , body weight Inhalation ATE 3 mg/L , vapour
Acrylic acid 79-10-7		acute 1	STOT SE 3 H335 C>=1%	

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 for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

Skin Contact:

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Not applicable.

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

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

Prevent further leakage or spillage if safe to do so. 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. Wear protective gloves and eye/face protection. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Avoid release to the environment. Avoid breathing 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.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in a cool, dry, well ventilated place and keep container tightly closed. Keep away from heat sources and direct sunlight. Keep away from sources of ignition - refrain from smoking. Take precautionary measures against electrostatic loading - earthing necessary during loading operations. Vapours may form explosive mixtures with air. Observe the general rules of industrial fire protection.

Storage Temperature: Store at 0 - 30 °C

Reason: Quality.

Storage Class (TRGS 510): 6.1C

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

111-76-2 2-Butoxyethanol

United Kingdom: WEL (Workplace Exposure Limits)	25 ppm (TWA) 123 mg/m ³ (TWA) (skin) 50 ppm (STEL) 246 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	20 ppm (TWA) 98 mg/m ³ (TWA) 50 ppm (STEL) 246 mg/m ³ (STEL) (skin)
Other Value:	Not established

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

79-10-7 Acrylic acid

United Kingdom: WEL (Workplace Exposure Limits)	10 ppm (TWA) 29 mg/m ³ (TWA) 20 ppm (STEL) 59 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	1 ppm skin (Allnex)

Biological Exposure Limit(s)

111-76-2 2-Butoxyethanol

Biological Monitoring Guidance Values (United Kingdom)	240 mmol/mol creatinine acid	Medium: urine	Time: post shift	Parameter: Butoxyacetic acid
Biological Exposure Indices (ACGIH)	200 mg/g creatinine (urine - end of shift)			

100-42-5 Styrene

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

20 µg/L (urine - end of shift)

Derived No Effect Level (DNEL):**2-Butoxyethanol (111-76-2)**

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	98	mg/m ³	Long term, systemic
Worker	inhalation	1091	mg/m ³	Short term, systemic
Worker	inhalation	246	mg/m ³	Long term, local
General Population	inhalation	59	mg/m ³	Long term, systemic
General Population	inhalation	426	mg/m ³	Short term, systemic
General Population	inhalation	147	mg/m ³	Short term, local
General Population	Oral	6.3	mg/kg/day	Long term, systemic
General Population	Oral	26.7	mg/kg/day	Short term, systemic

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	Long 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

Acrylic acid (79-10-7)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	30	mg/m ³	Long term, local
Worker	inhalation	30	mg/m ³	Short term, local
Worker	Dermal	1	mg/cm ²	Short term, local
General Population	inhalation	3.6	mg/m ³	Long term, local
General Population	inhalation	3.6	mg/m ³	Short term, local
General Population	Dermal	1	mg/cm ²	Short term, local
Worker	inhalation	30	mg/m ³	Long term, systemic
Worker	inhalation	30	mg/m ³	Short term, systemic
Worker	Dermal	1	mg/cm ²	Long term, local
General Population	inhalation	3.6	mg/m ³	Long term, systemic
General Population	inhalation	3.6	mg/m ³	Short term, systemic
General Population	Dermal	1	mg/cm ²	Long term, local

Predicted No Effect Concentration (PNEC):**2-Butoxyethanol (111-76-2)**

Compartment	PNEC	Units
Fresh water	8.8	mg/l
Marine water	0.88	mg/l
Sewage treatment plant	463	mg/l
Sediment (fresh water)	34.6	mg/kg
Sediment (marine water)	3.46	mg/kg
Soil	2.33	mg/kg
Secondary Poisoning	20	mg/kg food

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

Acrylic acid (79-10-7)

Compartment	PNEC	Units
Fresh water	0.003	mg/l
Marine water	0.0003	mg/l
Intermittent water release	0.001	mg/l
Sewage treatment plant	0.9	mg/l
Sediment (fresh water)	0.024	mg/kg
Sediment (marine water)	0.002	mg/kg
Soil	1	mg/kg
Secondary Poisoning	0.03	mg/kg food

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.

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.

Skin Protection:

Avoid skin contact.

Wear impermeable gloves and suitable protective clothing.

Since this product is absorbed through the skin, care must be taken to prevent skin contact and contamination of clothing.

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:

Nitrile rubber (NBR), thickness: > 0.38 mm, break through time: up to 480 min

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

Nitrile rubber (NBR), thickness: 0.12 mm, break through time: up to 30 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:

Natural rubber (NRL), thickness: 0.12 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. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home. SPECIAL HANDLING ADVISE - ATTENTION! This product may release Triethylamine when drying.

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 PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Operation carried out for < 8 hours Handle substance within a closed system. Clear spills immediately. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90%. Use suitable eye protection.
Process Category	PROC2 - Use in closed, continuous process with occasional controlled exposure (e.g. sampling)
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Operation carried out for < 8 hours Handle substance within a closed system. Transfer via enclosed lines. Avoid dip sampling. Clear spills immediately. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90%. Use suitable eye protection.
Process Category	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) 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. Provide extract ventilation to points where emissions occur. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90%. Use suitable eye protection.
Process Category	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non 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 Provide extract ventilation to points where emissions occur. Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Use drum pumps or carefully pour from container. Drain down and flush system prior to equipment break-in or maintenance. Clear spills immediately. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90%. Use suitable eye protection.
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 Provide extract ventilation to points where emissions occur. Handle substance within a closed system. Clean transfer lines prior to decoupling. Use drum pumps or carefully pour from container. Avoid

	spillage when withdrawing pump. Clear spills immediately. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90%. Use suitable eye protection.
Process Category	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Operation carried out for < 8 hours Fill containers/cans at dedicated fill points supplied with local extract ventilation. Put lids on containers immediately after use. Clear spills immediately. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90%. Use suitable eye protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	liquid
Colour:	clear yellowish brown
Odor:	organic solvent
Odor Threshold:	See Section 8 for exposure limits.
Melting Point:	Not applicable
Boiling Point:	100 - 200 °C
Flammability:	Stable vapours can explode if exposed to flame.
Flammable Limits (% By Vol):	Lower: 1.1 Upper: 10.6 (value for solvent)
Flash point:	~ 63 °C DIN EN ISO 1523
Autoignition temperature:	240 °C DIN 51794
Decomposition Temperature:	Not applicable
pH:	Not applicable
Viscosity (Kinematic):	Not applicable
Viscosity (Dynamic):	8000 - 14000 mPa.s @ 23 °C DIN EN ISO 3219
Solubility In Water:	Insoluble
Solubility In Solvent:	Not available
Partition coefficient	Not applicable
n-octanol/water (log value):	
Vapor Pressure:	0.8 hPa (value for solvent)
Specific Gravity/Density:	1.02 g/cm ³ @ 20 °C DIN EN ISO 2811-2
Vapour density:	Not applicable
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: Will not occur
Conditions To Avoid: None known.

10.4 CONDITIONS TO AVOID Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

10.5 INCOMPATIBLE MATERIALS When driers such as cobalt salts are added, air oxidation of the resin or materials contaminated with the resins may cause spontaneous ignition. To avoid spontaneous ignition prevent residue buildup; store overspray wastes, spray booth filters and other contaminated materials in a water filled container

10.6 HAZARDOUS DECOMPOSITION PRODUCTS Carbon monoxide (CO)
Carbon dioxide

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: Toxic if inhaled

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

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

Specific target organ toxicity (STOT) - single exposure: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

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	9.7 mg/l (Vapors)

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	Irritating
Acute Irritation	eye	Irritating

ALLERGIC SENSITIZATION

Sensitization	Skin	No data
Sensitization	respiratory	No data

SUBACUTE/SUBCHRONIC TOXICITY

oral (gavage)	rat	No data
dermal	rat	No data

GENOTOXICITY**Assays for Gene Mutations**

Ames Salmonella Assay	No data
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OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

2-Butoxyethanol has acute oral (rat) and dermal (rat) LD50 values of 1200 and > 2000 mg/kg, respectively. The 4-hour inhalation LC50 (rat) value for 2-Butoxyethanol is 3 mg/L. Direct contact to 2-butoxyethanol can cause moderate eye and skin irritation. Sensitization was not observed upon dermal exposure to guinea pigs. 2-butoxyethanol is a strong haemolytic agent, particularly after acute and subacute exposures at lethal and sublethal dose levels. From the available data, 2-Butoxyethanol is not genotoxic. Fertility was slightly affected at toxic doses, and a slight decrease of the weight of the pups at birth was observed. Carcinogenicity is not expected.

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.

Acrylic acid has acute oral (rat) LD50, acute dermal (rabbit) LD50, and acute inhalation (rat, 4-hr, vapor) LC50 values of 617-1405 mg/kg, >2000 mg/kg, and >1730 ppm (>5.1 mg/L), respectively. Direct contact may cause severe eye irritation with corneal injury which may result in permanent impairment of vision and even blindness. Chemical burns may occur. Vapors may also cause severe eye irritation. Skin contact may cause severe skin burns. Symptoms may include pain, severe local redness, swelling, blistering and tissue damage. Inhalation overexposure may cause severe irritation of the respiratory tract. Repeated overexposures may have effects on the kidney. Acrylic acid did not cause cancer when given to rats in their drinking water throughout their lifetime. No skin tumors occurred in mice receiving repeated skin applications of acrylic acid at nonirritating doses. A slight, not statistically significant increase in skin tumors reported in another study is difficult to interpret due to the low incidence and conflicting information regarding dose. This substance has been toxic to the fetus in laboratory animals at doses toxic to the mother but has not been found to cause birth defects in laboratory animals. In laboratory animal studies with acrylic acid, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. The results of in vitro genetic toxicity studies are predominantly negative. Animal genetic toxicity studies are negative (not mutagenic).

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

The ecological assessment for this material is based on an evaluation of its components. This material is not classified as dangerous for the environment.

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
2-Butoxyethanol (111-76-2)	LC50 = 1490 mg/L - Lepomis macrochirus (96h) LC50 = 1474 mg/L - Oncorhynchus mykiss (96h) NOEC > 100 mg/L - Brachydanio rerio (21d)
Styrene (100-42-5)	LC50 = 3.24 - 4.99 mg/L - Pimephales promelas (96h)
Acrylic acid (79-10-7)	LC50 = 27 mg/L - Salmo gairdneri (96h)

Component / CAS No.	Toxicity to Water Flea
2-Butoxyethanol (111-76-2)	EC50 > 1000 mg/L - Daphnia magna (48h) NOEC > 100 mg/L - Daphnia magna (21d)
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)
Acrylic acid (79-10-7)	EC50 = 47 mg/L - Daphnia magna (48h) EC50 = 95 mg/L - Daphnia magna (48h) NOEC = 12-19 mg/L - Daphnia magna (21d)

Component / CAS No.	Toxicity to Algae
2-Butoxyethanol (111-76-2)	EC50 = 623 mg/L - pseudokirchneriella subcapitata (72hrs) NOEC = 88 mg/L - pseudokirchneriella subcapitata (72hrs)
Styrene (100-42-5)	EC50 = 6.3 mg/L - Pseudokirchneriella subcapitata (96h)
Acrylic acid (79-10-7)	EC50 = 0.13 mg/L - Scenedesmus subspicatus (72h) EC10 = 0.03 mg/L - Scenedesmus subspicatus (72h)

Component / CAS No.	Partition coefficient
2-Butoxyethanol (111-76-2)	0.81
Styrene (100-42-5)	2.96
Acrylic acid (79-10-7)	0.46

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? Not applicable/Not regulated

IMO

Dangerous Goods? Not applicable/Not regulated

ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

14.6 SPECIAL PRECAUTIONS FOR USER

No information available

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): Not applicable

Water Endangering Class (Germany): 1 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 Kingdom: When purchased from allnex UK this product is compliant with the UK-REACH Regulation as all its components are either notified, excluded, exempt and/or registered. If the material has been purchased by your legal entity based in GB from an allnex legal entity based in the EEA (EU or Norway) in 2019 or 2020, you can continue to import the material into GB as it is covered by allnex DUIN.

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: The final product contains a PLC (Polymer of Low Concern), which is exempt from notification in Australia as set forth by the Industrial Chemicals (General) Rules 2019. Introducers (importers and manufacturers) need to comply with annual reporting and record-keeping requirements.

New Zealand: This product is approved or exempt under the Hazardous Substances and New Organisms (HSNO) Act.

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

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

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).

Turkey: When purchased directly from Allnex by a Turkish legal entity, this product is compliant with the PRE-registration requirements of KKDIK as all its components are either pre-registered, excluded and/or exempt.

15.2 CHEMICAL SAFETY ASSESSMENT

No Chemical Safety Assessment has been carried out.

SECTION 16: OTHER INFORMATION

Reasons for Issue: Revised Section 3
Revised Section 8
Revised Section 11
Revised Section 12
Revised Section 16

Date Prepared: 27-May-2025

Date of last significant revision: 27-May-2025

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

2-Butoxyethanol

- H302 - Harmful if swallowed.
- H331 - Toxic if inhaled.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.

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.

Acrylic acid

- H226 - Flammable liquid and vapour.
- H302 - Harmful if swallowed.
- H312 - Harmful in contact with skin.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H332 - Harmful if inhaled.
- H335 - May cause respiratory irritation.
- H400 - Very toxic to aquatic life.
- H411 - Toxic to aquatic life with long lasting effects.

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 PROC2 PROC3 PROC4 PROC5 PROC8a PROC8b PROC9 PROC15	ERC2	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		PROC1 PROC2 PROC3 PROC4 PROC5 PROC7 PROC8a PROC8b PROC9 PROC10 PROC13 PROC15	ERC4	Available on request*
3.	Professional application of coatings and inks	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)		PROC1 PROC2 PROC3 PROC4 PROC5 PROC8a PROC8b PROC9 PROC10 PROC11 PROC13 PROC15 PROC19	ERC8a ERC8d	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)

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.
