

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 **Neviprim adhesion primer**

Product Description: Moisture-curing polyurethane resin

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: Nedform BV, Hofdwarweg 20, 6161 DD Geleen, The Netherlands

For Product and all Non-Emergency Information call Nedform or contact us at <http://www.nedform.com>

Local Contact Information: Nedform BV, Hofdwarweg 20, 6161 DD Geleen, The Netherlands
Phone: +21 (0) 464106260

1.4 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.

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

Carcinogenicity Hazard Category 2

Acute Toxicity (Inhalation) Hazard Category 4

Specific Target Organ Toxicity (STOT) - Repeated Exposure Hazard Category 2

Specific Target Organ Toxicity (STOT) - Single Exposure Hazard Category 3

Skin Corrosion / Irritation Hazard Category 2

Serious Eye Damage / Eye Irritation Hazard Category 2

Respiratory Sensitizer Hazard Category 1
Skin Sensitizer Hazard Category 1
Aquatic Environment Long-term Hazard Category 3

2.2 LABEL ELEMENTS



Signal Word

Danger

Hazard Statements

H226 - Flammable liquid and vapour.
H351 - Suspected of causing cancer.
H332 - Harmful if inhaled.
H373 - May cause damage to organs through prolonged or repeated exposure.
H335 - May cause respiratory irritation.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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.
P271 - Use only outdoors or in a well-ventilated area.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P285 - In case of inadequate ventilation wear respiratory protection.
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/shower.
P370 + P378 - In case of fire: Use CO₂, dry chemical, or foam for extinction.
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.
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
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 and national regulations.

2.3 OTHER HAZARDS

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

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

3.2 MIXTURES

Component / CAS No.	%	EC-No	REACH Registration Number	REACH SVHC	Classification according to Regulation (EC) No 1272/2008 (CLP)	M-Factor
Xylene 1330-20-7	26 - 29	215-535-7	01-2119488216-32	-	Flam. Liq. 3 (H226) Acute Tox. 4 (H312) Acute Tox. 4 (H332) STOT RE 2 (H373) STOT Single 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Asp. Tox. 1 (H304)	-
1-Methoxy-2-propanol acetate 108-65-6	11 - 13	203-603-9	01-2119475791-29	-	Flam. Liq. 3 (H226) STOT SE 3 (H336)	-
Ethylbenzene 100-41-4	8 -< 10	202-849-4	01-2119489370-35	-	Flam. Liq. 2 (H225) Acute Tox. 4 (H332) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Chronic 3 (H412)	-
Toluene diisocyanate 26471-62-5	< 1,5	247-722-4	01-2119454791-34	-	Carc. 2 (H351) C Acute Tox. 1 (H330) C STOT SE 3 (H335) C Skin Irrit. 2 (H315) C Eye Irrit. 2 (H319) C Resp. Sens. 1 (H334) C Skin Sens. 1 (H317) C Aquatic Chronic 3 (H412) C	-
Triphenyl phosphite 101-02-0	< 0,3	202-908-4	01-2119511213-58	-	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	1 1
2-(2'-Hydroxy-3',5'-di-tert-amyl phenyl) benzotriazole 25973-55-1	< 0,15	247-384-8	01-2119955688-17	X	STOT Rep. 2 (H373) Aquatic Chronic 4 (H413)	-
Toluene 108-88-3	< 0.4	203-625-9	01-2119471310-51	-	Flam. Liq. 2 (H225) Repr. 2 (H361d) STOT RE 2 (H373) STOT SE 3 (H336) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Asp. Tox. 1 (H304) Aquatic Chronic 3 (H412)	-

XYLENE: Several REACH registrations cover the multi-constituent substance with xylene isomers, ethylbenzene (and toluene). The other REACH descriptions are:

Aromatic hydrocarbons, C8 (EC-No. 905-570-2)

Reaction mass of ethylbenzene and m-xylene and p-xylene (EC-No. 905-562-9)

Reaction mass of ethylbenzene and xylene (EC-No. 905-588-0)

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:

Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

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 NEEDS

Not applicable.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Extinguishing Media:

Use water spray, alcohol 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

Use appropriate containment to avoid environmental contamination. 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 REFERENCES 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. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. 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. Containers must be bonded and grounded when pouring or transferring material. Avoid excessive heat, contamination or exposure to direct sunlight to prevent polymerization.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

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. Store in a cool, dry, well ventilated place and keep container tightly closed. 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 0 - 30 °C

Reason: Quality.

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

1330-20-7 Xylene

United Kingdom: WEL (Workplace Exposure Limits)	50 ppm (TWA) 220 mg/m ³ (TWA) (skin) 100 ppm (STEL) 441 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	50 ppm (TWA) 221 mg/m ³ (TWA) 100 ppm (STEL) 442 mg/m ³ (STEL) (skin)
Other Value:	Not established

108-65-6 1-Methoxy-2-propanol acetate

United Kingdom: WEL (Workplace Exposure Limits)	50 ppm (TWA) 274 mg/m ³ (TWA) (skin) 100 ppm (STEL) 548 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	50 ppm (TWA) 275 mg/m ³ (TWA) 100 ppm (STEL) 550 mg/m ³ (STEL) (skin)
Other Value:	Not established

100-41-4 Ethylbenzene

United Kingdom: WEL (Workplace Exposure Limits)	100 ppm (TWA) 441 mg/m ³ (TWA) (skin) 125 ppm (STEL) 552 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	100 ppm (TWA) 442 mg/m ³ (TWA) 200 ppm (STEL) 884 mg/m ³ (STEL) (skin)
Other Value:	Not established

108-88-3 Toluene

United Kingdom: WEL (Workplace Exposure Limits)	50 ppm (TWA) 191 mg/m ³ (TWA) (skin) 100 ppm (STEL) 384 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	50 ppm (TWA) 192 mg/m ³ (TWA) 100 ppm (STEL) 384 mg/m ³ (STEL) (skin)
Other Value:	Not established

Biological Exposure Limit(s)

1330-20-7 Xylene

Biological Monitoring Guidance 650 mmol/mol creatinine Medium: urine Time: post shift Parameter: Methyl Values (United Kingdom) hippuric acid

Biological Exposure Indices (ACGIH) 1.5 g/g creatinine (urine - end of shift)

100-41-4 Ethylbenzene

Biological Exposure Indices (ACGIH) 0.15 g/g creatinine (urine - end of shift)

26471-62-5 Toluene diisocyanate

Biological Exposure Indices (ACGIH) 5 µg/g creatinine (urine - end of shift)

108-88-3 Toluene

Biological Exposure Indices (ACGIH) 0.02 mg/L (blood - prior to last shift of workweek)

0.03 mg/L (urine - end of shift)

0.3 mg/g creatinine (urine - end of shift)

Derived No Effect Level (DNEL):**Xylene (1330-20-7)**

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	442	mg/m ³	Short term, systemic
Worker	inhalation	442	mg/m ³	Short term, local
Worker	Dermal	212	mg/kg	Long term, systemic
Worker	inhalation	221	mg/m ³	Long term, systemic
Consumer	inhalation	260	mg/m ³	Short term, systemic
Consumer	inhalation	260	mg/m ³	Short term, local
Consumer	Dermal	125	mg/kg	Long term, systemic
Consumer	inhalation	65.3	mg/m ³	Long term, systemic
Consumer	Oral	12.5	mg/kg/day	Long term, systemic
Worker	inhalation	221	mg/m ³	Long term, local
Consumer	inhalation	65.3	mg/m ³	Long term, local

1-Methoxy-2-propanol acetate (108-65-6)

Use	Route	DNEL	Units	Effects Type
Worker	Dermal	796	mg/kg/day	Long term, systemic
Worker	inhalation	275	mg/m ³	Long term, systemic
General Population	Dermal	320	mg/kg/day	Long term, systemic
General Population	inhalation	33	mg/m ³	Long term, systemic
General Population	Oral	36	mg/kg/day	Long term, systemic
Worker	inhalation	550	mg/m ³	Short term, local
General Population	inhalation	33	mg/m ³	Long term, systemic
General Population	inhalation	33	mg/m ³	Long term, local
General Population	Oral	500	mg/kg	Short term, systemic

Ethylbenzene (100-41-4)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	77	mg/m ³	Long term, systemic
Worker	inhalation	293	mg/m ³	Long term, local
Worker	Dermal	180	mg/kg/day	Long term, systemic
General Population	inhalation	15	mg/m ³	Long term, systemic
General Population	Oral	1.6	mg/kg/day	Long term, systemic

Toluene diisocyanate (26471-62-5)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	0.14	mg/m ³	Short term, local
Worker	inhalation	0.14	mg/m ³	Short term, systemic
Worker	inhalation	0.035	mg/m ³	Long term, local
Worker	inhalation	0.035	mg/m ³	Long term, systemic

Triphenyl phosphite (101-02-0)**2-(2'-Hydroxy-3',5'-di-tert-amylphenyl) benzotriazole (25973-55-1)**

Use	Route	DNEL	Units	Effects Type
Worker	Dermal	0.3	mg/kg	Long term, systemic

Worker	inhalation	0.7	mg/m ³	Long term, systemic
Consumer	Dermal	0.14	mg/kg	Long term, systemic
Consumer	inhalation	0.17	mg/m ³	Long term, systemic

Toluene (108-88-3)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	384	mg/m ³	Short term, local
Worker	inhalation	384	mg/m ³	Short term, systemic
Worker	inhalation	192	mg/m ³	Long term, local
Worker	inhalation	192	mg/m ³	Long term, systemic
Worker	Dermal	384	mg/kg/day	Long term, systemic
General Population	inhalation	226	mg/m ³	Short term, local
General Population	inhalation	226	mg/m ³	Short term, systemic
General Population	inhalation	56.5	mg/m ³	Long term, systemic
General Population	Dermal	226	mg/kg/day	Long term, systemic
General Population	Oral	8.13	mg/kg/day	Long term, systemic
General Population	inhalation	56.5	mg/m ³	Long term, local

Predicted No Effect Concentration (PNEC):**Xylene (1330-20-7)**

Compartment	PNEC	Units
Fresh water	0.327	mg/l
Marine water	0.327	mg/l
Intermittent water release	0.327	mg/l
Sewage treatment plant	6.58	mg/l
Sediment (fresh water)	12.46	mg/kg
Sediment (marine water)	12.46	mg/kg
Soil	2.31	mg/kg

1-Methoxy-2-propanol acetate (108-65-6)

Compartment	PNEC	Units
Fresh water	0.635	mg/l
Marine water	0.0635	mg/l
Intermittent water release	6.35	mg/l
Sewage treatment plant	100	mg/l
Sediment (fresh water)	3.29	mg/kg
Sediment (marine water)	0.329	mg/kg
Soil	0.29	mg/kg

Ethylbenzene (100-41-4)

Compartment	PNEC	Units
Fresh water	0.1	mg/l
Marine water	0.01	mg/l
Intermittent water release	0.1	mg/l
Sewage treatment plant	9.6	mg/l
Sediment (fresh water)	13.7	mg/kg
Sediment (marine water)	1.37	mg/kg
Soil	2.68	mg/kg
Oral (Secondary Poisoning)	20	mg/kg food

Toluene diisocyanate (26471-62-5)

Compartment	PNEC	Units
Sewage treatment plant	1	mg/l
Fresh water	0.0125	mg/l
Intermittent water release	0.125	mg/l
Marine water	0.00125	mg/l
Soil	1	mg/kg

2-(2'-Hydroxy-3',5'-di-tert-amylphenyl) benzotriazole (25973-55-1)

Compartment	PNEC	Units
Fresh water	0.01	mg/l
Marine water	0.001	mg/l
Soil	90	mg/kg
Sediment (fresh water)	451	mg/kg
Sediment (marine water)	45.1	mg/kg
Sewage treatment plant	1	mg/l
Oral (Secondary Poisoning)	13.2	mg/kg

Toluene (108-88-3)

Compartment	PNEC	Units
Fresh water	0.68	mg/l
Sediment (fresh water)	16.39	mg/l
Soil	2.89	mg/kg
Sewage treatment plant	13.61	mg/l
Marine water	0.68	mg/l
Sediment (marine water)	16.39	mg/l
Intermittent water release	0.68	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.

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.

Gloves for repeated or prolonged exposure - non exhaustive list:

Polyethylene Nylon (PE), thickness: > 0.062 mm, break through time: > 480 min

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

Nitrile rubber (NBR), thickness: > 0.56 mm, break through time: < 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:

Nitrile rubber (NBR), 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:

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. 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Colour:	light yellow
Appearance:	liquid
Odor:	organic solvent
Odor Threshold:	See Section 8 for exposure limits.
pH:	Not applicable
Melting Point:	Not available
Boiling Point:	100 - 200 °C
Flash point:	~ 32 °C DIN EN ISO 1523
Evaporation Rate:	Not available
Flammable Limits (% By Vol):	Lower: 1 Upper: 7 (values for solvent)
Vapor Pressure:	8 hPa @ 20 °C (value for solvent)
Vapour density:	Not available
Specific Gravity/Density:	~ 1.03 g/cm ³ DIN EN ISO 2811-2 @ 20 °C
Solubility In Water:	Insoluble
Partition coefficient (n-octanol/water):	Not available
Autoignition temperature:	> 330 °C (value for solvent) DIN 51794
Decomposition Temperature:	Not available
Viscosity (Kinematic):	Not available
Viscosity (Dynamic):	290 - 590 mPa.s @ 23 °C DIN EN ISO 3219
Explosive Properties:	Explosion will be caused by solvent contained in the final product.
Oxidizing Properties:	No

9.2 OTHER INFORMATION

Fat Solubility (Solvent-Oil):	Not available
Percent Volatile (% by wt.):	Not available
Solids Content:	49 - 53 % DIN 55671
Saturation In Air (% By Vol.):	Not available
Acid Number (mg KOH/g):	Not available
Hydroxyl Value (mg KOH/g):	Not available
Volatile Organic Content (1999/13/EC):	~ 51 %

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY	No information available
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10.2 CHEMICAL STABILITY Stable

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Polymerization: May occur
Conditions To Avoid: Avoid contact with water, polyols and amines.

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

10.5 INCOMPATIBLE MATERIALS Reactions with acids, alkalies and oxidizing agents

10.6 HAZARDOUS DECOMPOSITION PRODUCTS oxides of carbon
nitrogen oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

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: Harmful if inhaled

Skin corrosion / irritation: Causes skin irritation

Serious eye damage / eye irritation: Causes serious eye irritation

Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled

Skin sensitization: May cause an allergic skin reaction

Carcinogenicity: Suspected of causing cancer.

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: May cause respiratory irritation.

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

Route of Exposure: inhalation **Affected Organs:** Central nervous system, Liver, Kidneys, Respiratory System, Skin, Lung

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 (gavage)	rat	Acute LD50	> 2000 mg/kg
dermal	rabbit	Acute LD50	> 2000 mg/kg
inhalation	rat	Acute LC50 4 hr	10.35 mg/l (Vapors)

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

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	Irritating
Acute Irritation	eye	Irritating

ALLERGIC SENSITIZATION

Sensitization	Skin	Sensitizing
Sensitization	respiratory	Sensitizing

SUBACUTE/SUBCHRONIC TOXICITY

Specific target organ toxicity (repeated exposure): May cause damage to central nervous system, liver and kidneys through prolonged or repeated exposure by inhalation. May cause damage to skin, lung and respiratory system through prolonged or repeated exposure by inhalation. .

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

Xylene has an acute oral LD50 (rat) of > 3523 mg/kg, acute dermal LD50 (rabbit) value of 4200 mg/kg, and an acute 4-hour LC50 (rat) of 29 mg/l (vapor). Inhalation of vapors may be irritating to the nose and throat. Inhalation of high concentrations may result in nausea, vomiting, headache, ringing in the ears, and severe breathing difficulties, which may be delayed in onset. High vapor concentrations are anesthetic and central nervous system depressants. Ingestion causes burning sensation in mouth and stomach, nausea vomiting and salivation. Minute amounts aspirated into the lungs can produce a severe hemorrhagic pneumonitis with severe pulmonary injury or death. Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Skin contact results in moderate irritation and loss of natural oils. Repeated or prolonged skin contact may cause a skin rash. May be absorbed through the skin. Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage. Repeated exposure of eyes to high concentrations of vapor may cause reversible eye damage. Chronic, repeated exposure may cause blood cell damage resulting in low blood cell count. May damage liver and kidneys. Xylene has been investigated for reproductive toxicity and may cause teratogenic effects.

1-Methoxy-2-propanol acetate has acute oral (rat), acute dermal (rabbit) LD50 values of 6190 mg/kg and >5000 mg/kg, respectively. No mortality was reported in inhalation studies. Direct contact with 1-Methoxy-2-propanol acetate can cause slight eye and skin irritation, but classification criteria are not met. In three sensitisation studies, the substance did not induce sensitisation in guinea pigs. No effects were observed in a reprotox screening study up to the highest level. A chronic toxicity study via inhalation with rats with a structural analogue has not revealed a higher tumor incidence, not specific target organ toxicity. Reproductive performances and development toxicity was not observed in inhalation studies for these endpoints.

Ethylbenzene has acute oral (rat) and dermal (rabbit) LD50 values of 3500 mg/kg and 15400 mg/kg respectively. The 4-hour inhalation LC50 in rats is 2180 ppm. It is a mild eye (rated 2 on a scale of 10) and a mild skin (rated 4 on a scale of 10) irritant. Prolonged exposure to the vapor of ethylbenzene may cause irritation of the eyes and upper respiratory tract, vertigo, motor ataxia, unconsciousness, and hematological disorders and hepatobiliary complaints. The International Agency for Research on Cancer has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate

evidence for cancer in exposed humans. Developmental toxicity studies in rats indicate skeletal malformation and reduced foetal weight.

The acute oral (rat) and acute dermal (rabbit) LD50 values for toluene diisocyanate are 4130 mg/kg and > 9400 mg/kg, respectively. The inhalation LC50 (rat / 1 hour) value of toluene diisocyanate vapor is 0.48 mg/l. Acute exposure to toluene diisocyanate vapor or aerosol may cause severe respiratory irritation. Exposure to low levels of toluene diisocyanate vapor or aerosol may cause respiratory sensitization (allergic reactions). Respiratory sensitization manifests itself as severe breathing difficulty similar to asthma. This reaction may occur 6-24 hours after exposure and at exposure levels below the established permissible limits. Repeated overexposure to low levels of vapors or aerosols may cause damage to the lungs and upper respiratory tract. Contact with this substance may cause moderate eye and skin irritation and allergic skin reactions. In a study by the NTP, TDI was administered by gavage to rats and produced an increase in the number of tumors in the animals. When administered by inhalation, no carcinogenic effects were observed. Toluene diisocyanate is a chemical known to the State of California to cause cancer.

Phosphorous acid, triphenyl ester may cause serious eye and moderate skin irritation. The oral, dermal and inhalation LD50 values for the rat are 1590 mg/kg, > 2000 mg/kg and > 5mg/l (dust/mist) respectively. Sensitization has been observed after dermal exposure. No mutagenicity could be evidenced in in-vitro testing. There is no experimental evidence for adverse effects in reproduction. There is no experimental evidence of carcinogenic effect.

The acute oral (rat) and acute dermal (rabbit) LD50 values for 2-(2'-Hydroxy-3',5'-di-tert-amylphenyl)benzotriazole are >7,750 mg/kg and >1,100 mg/kg, respectively. The acute 4-hour inhalation (rat) LC50 is >0.4 mg/l. This material is minimally irritating to rabbit skin, but is non-irritating to rabbit eyes. Direct contact with this material did not produce dermal sensitization in guinea pigs. This material is negative in the Ames test.

2-(2'-Hydroxy-3',5'-di-tert-amylphenyl)benzotriazole was fed to one group of rats for 49 days at a dose level of 2,000 ppm (20 mg/kg). Effects noted were decreased body weight and increased liver, kidney and testes (males only) weight. Enlarged, discolored livers were seen at terminal necropsy. Histopathology revealed enlarged parenchymal cells and necrosis of individual hepatocytes. During two separate 90-day feeding studies with rats, this material produced liver and kidney damage, and signs of anemia. The no-observable effect level (NOEL) for the anemia was 100 ppm. The NOEL for the liver and kidney effects were less than 100 ppm and 400 ppm, respectively. During a 90-day feeding study with dogs, liver damage (NOEL less than 15 mg/kg), kidney damage (NOEL 15 mg/kg), signs of anemia (NOEL 60 mg/kg) and adverse reproductive effects (atrophy of the uterus and abnormal spermiogenesis, (NOEL 30 mg/kg), and atrophy of the prostate (NOEL 15 mg/kg) were produced.

Toluene has acute oral (rat) and dermal (rabbit) LD50 values of 4,328 mg/kg and 12124 mg/kg, respectively. The acute 4-hour inhalation (rat, female) LC50 value is 5,060 ppm (19.07 mg/L). Toluene is a severe eye and moderate skin irritant. Inhalation overexposure to toluene vapor can cause headache, fatigue, nausea, and central nervous system depression. Sustained inhalation of high levels of toluene has been shown to cause reversible kidney and liver damage. Subchronic inhalation of toluene vapors have caused permanent hearing loss, decreased learning capabilities and damage to the eyes in laboratory animal tests. Deliberate inhalation of high concentrations of toluene vapor by pregnant women has been shown to adversely affect the fetus. These fetotoxic effects include intrauterine growth retardation and delayed postnatal development. The fetotoxic effects of toluene seen in laboratory animals are similar to those seen in humans. Ingestion of toluene in laboratory animals caused mild gastritis and harmful effects on the respiratory system, kidneys, liver and heart. Ingestion in laboratory animals also caused harmful effects on the central nervous system and death. It has also been reported that subchronic ingestion of toluene caused brain and bladder damage in laboratory animals. Due to synergistic effects, the toxicity of toluene may be enhanced by exposure to n-hexane, benzene, xylene, acetylsalicylic acid and chlorinated hydrocarbons. The literature reports that toluene is an aspiration hazard, that acute oral exposure resulted in reversible visual dysfunction, and that chronic exposure has caused altered immune function in animals. Toluene is a chemical known to the State of California to cause reproductive toxicity.

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 ECOTOXICITY

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 OTHER ADVERSE EFFECTS

Not available

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Fish
Xylene (1330-20-7)	LC50 13.1 - 16.5 mg/L - <i>Lepomis macrochirus</i> (96h) LC50 13.5 - 17.3 mg/L - <i>Oncorhynchus mykiss</i> (96h) LC50 2.661 - 4.093 mg/L - <i>Oncorhynchus mykiss</i> (96h) LC50 23.53 - 29.97 mg/L - <i>Pimephales promelas</i> (96h) LC50 30.26 - 40.75 mg/L - <i>Poecilia reticulata</i> (96h) LC50 7.711 - 9.591 mg/L - <i>Lepomis macrochirus</i> (96h) LC50 = 13.4 mg/L - <i>Pimephales promelas</i> (96h) LC50 = 19 mg/L - <i>Lepomis macrochirus</i> (96h) LC50 = 780 mg/L - <i>Cyprinus carpio</i> (96h) LC50 > 780 mg/L - <i>Cyprinus carpio</i> (96h)
1-Methoxy-2-propanol acetate (108-65-6)	LC50 = 130 mg/L - <i>Oncorhynchus mykiss</i> - 96hrs NOEC = 47.5 mg/L - <i>Oryzias latipes</i> - 14d
Ethylbenzene (100-41-4)	LC50 11.0 - 18.0 mg/L - <i>Oncorhynchus mykiss</i> (96h) LC50 7.55 - 11 mg/L - <i>Pimephales promelas</i> (96h) LC50 9.1 - 15.6 mg/L - <i>Pimephales promelas</i> (96h) LC50 = 32 mg/L - <i>Lepomis macrochirus</i> (96h) LC50 = 4.2 mg/L - <i>Oncorhynchus mykiss</i> (96h) LC50 = 9.6 mg/L - <i>Poecilia reticulata</i> (96h)
Toluene diisocyanate (26471-62-5)	Not available
Triphenyl phosphite (101-02-0)	Not available
2-(2'-Hydroxy-3',5'-di-tert-amylphenyl)	LC50 >100 mg/l - Zebra Fish (<i>Brachydanio rerio</i>)

benzotriazole (25973-55-1)	(96h)
Toluene (108-88-3)	LC50 = 5.5 mg/L - Oncorhynchus kisutch (96h) NOEC = 1.4 mg/L - Oncorhynchus kisutch (40d)

Component / CAS No.	Toxicity to Water Flea
Xylene (1330-20-7)	LC50 = 0.6 mg/L - Gammarus lacustris (48h) EC50 = 3.82 mg/L - water flea (48h)
1-Methoxy-2-propanol acetate (108-65-6)	EC50 = 408 mg/L - Daphnia magna - 48hrs
Ethylbenzene (100-41-4)	EC50 1.8 - 2.4 mg/L - Daphnia magna (48h)
Toluene diisocyanate (26471-62-5)	Not available
Triphenyl phosphite (101-02-0)	Not available
2-(2'-Hydroxy-3',5'-di-tert-amylphenyl) benzotriazole (25973-55-1)	EC50 > 10 mg/l - Daphnia pulex (48h) EC50 > 100 mg/l - Daphnia magna (24h)
Toluene (108-88-3)	EC50 = 3.78 mg/L - Ceriodaphnia dubia (48h) NOEC = 0.74 mg/L - Ceriodaphnia dubia(7d)

Component / CAS No.	Toxicity to Algae
Xylene (1330-20-7)	Not available
1-Methoxy-2-propanol acetate (108-65-6)	EC50 > 1000 mg/L - Selenastrum capricornutum - 72hrs NOEC = 1000 mg/L - Selenastrum capricornutum - 72hrs
Ethylbenzene (100-41-4)	EC50 1.7 - 7.6 mg/L - Pseudokirchneriella subcapitata (96h) EC50 2.6 - 11.3 mg/L - Pseudokirchneriella subcapitata (72h) EC50 = 4.6 mg/L - Pseudokirchneriella subcapitata (72h) EC50 > 438 mg/L - Pseudokirchneriella subcapitata (96h)
Toluene diisocyanate (26471-62-5)	Not available
Triphenyl phosphite (101-02-0)	Not available
2-(2'-Hydroxy-3',5'-di-tert-amylphenyl) benzotriazole (25973-55-1)	EC50 >10 mg/l - Green Algae (Scenedesmus subspicatus) (72h) NOEC < 0.1 mg/l Green Algae (Scenedesmus subspicatus) (72h)
Toluene (108-88-3)	EC50 = 134 mg/L - Chlorella vulgaris (3h) - reduced photosynthesis rate NOEC = 10 mg/L - Skeletonema costatum (72h)

Component / CAS No.	Partition coefficient
Xylene (1330-20-7)	2.77 - 3.15
1-Methoxy-2-propanol acetate (108-65-6)	log Kow = 1.2
Ethylbenzene (100-41-4)	3.2
Toluene diisocyanate (26471-62-5)	Not available
Triphenyl phosphite (101-02-0)	4.98
2-(2'-Hydroxy-3',5'-di-tert-amylphenyl) benzotriazole (25973-55-1)	Not available
Toluene (108-88-3)	2.7

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
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

No information available

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

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 (EC) No 850/2004): Not applicable

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

Substances subject to Authorization (Annex XIV of Regulation (EC) No 1907/2006): Yes

2-(2'-Hydroxy-3',5'-di-tert-amylphenyl) benzotriazole (< 0,15 %)

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.

Xylene (26 - 29 %)

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

1-Methoxy-2-propanol acetate (11 - 13 %)

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

Ethylbenzene (8 -< 10 %)

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 Nedform 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: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

New Zealand: This product is NOT approved 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 and ISHL) inventories or are not required to be listed on the Japanese inventories.

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

Taiwan: One or more components of this product are NOT included in 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 1

Date Prepared: 21-Mar-2020

Date of last significant revision: 12-Mar-2020

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

Xylene

- H226 - Flammable liquid and vapour.
- H304 - May be fatal if swallowed and enters airways.
- H312 - Harmful in contact with skin.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H332 - Harmful if inhaled.
- H335 - May cause respiratory irritation.
- H373 - May cause damage to organs through prolonged or repeated exposure.

1-Methoxy-2-propanol acetate

- H226 - Flammable liquid and vapour.
- H336 - May cause drowsiness or dizziness.

Ethylbenzene

- H225 - Highly flammable liquid and vapour.
- H304 - May be fatal if swallowed and enters airways.
- H332 - Harmful if inhaled.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects.

Toluene diisocyanate

- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H330 - Fatal if inhaled.
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 - May cause respiratory irritation.
- H351 - Suspected of causing cancer.
- H412 - Harmful to aquatic life with long lasting effects.

Triphenyl phosphite

- H302 - Harmful if swallowed.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.

2-(2'-Hydroxy-3',5'-di-tert-amylphenyl) benzotriazole

- H373 - May cause damage to organs through prolonged or repeated exposure.
- H413 - May cause long lasting harmful effects to aquatic life.

Toluene

- H225 - Highly flammable liquid and vapour.
- H304 - May be fatal if swallowed and enters airways.

H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H373 - May cause damage to organs through prolonged or repeated exposure.
H361d - Suspected of damaging the unborn child.
H412 - Harmful to aquatic life with long lasting effects.

Emergency phone numbers for other regions

Asia Pacific

Australia: +61 1800 022 037

China (PRC): +86(0)25 8547 7110 (Jiangsu registration center) / +86(0)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: +81 345 789 341 (Carechem 24)

Korea: +82 2 3479 8401 (Carechem 24)

Malaysia: +60 3 6207 4347 (Carechem 24)

New Zealand: +64 0800 803 002

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)

Canada and USA

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

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