SAFETY DATA SHEET
SN 1554 Sprayable Non-Flammable Contact Adhesive

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

1.1. Product identifier

Product name SN 1554 Sprayable Non-Flammable Contact Adhesive

Product number SN 1554

REACH registration notes All chemicals used in this product have been registered under REACH where required.

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

Identified uses Sprayable Polychloroprene Adhesive

Uses advised against Flexible PVC due to the risk of plasticiser migration

1.3. Details of the supplier of the safety data sheet

Supplier

Alpha Adhesives & Sealants Ltd
Llewellyn Close
Sandy Lane Ind. Estate
Stourport-on-Severn
Worcs. UK
DY13 9RH
Tel: 0044(0)1299 828626
Fax: 0044(0)1299 828666
Email: sales@alpha-adhesives.co.uk

1.4. Emergency telephone number

Emergency telephone 44 (0) 1299 828626 (Available 08.30 to 17.00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

Environmental hazards Not Classified

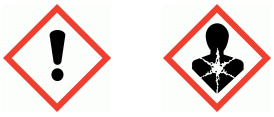
Human health Suspected of causing cancer. Causes serious eye irritation.

Environmental The product is not expected to be hazardous to the environment.

Physicochemical Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers.

2.2. Label elements

Pictogram



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Signal word	Warning
Hazard statements	H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	P202 Do not handle until all safety precautions have been read and understood. P264 Wash contaminated skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/ attention. P501 Dispose of contents/ container in accordance with national regulations.
Supplemental label information	EUH209 Can become highly flammable in use.
Contains	DICHLOROMETHANE, XYLENE
Supplementary precautionary statements	P201 Obtain special instructions before use. P337+P313 If eye irritation persists: Get medical advice/ attention. P405 Store locked up.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

DICHLOROMETHANE		**65-80%**
CAS number: 75-09-2	EC number: 200-838-9	REACH registration number: 01-2119480404-41
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373		

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XYLENE			1-5%
CAS number: 1330-20-7	EC number: 215-535-7	REACH registration number: 01-2119488216-32	

Classification
Flam. Liq. 3 - H226
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
STOT SE 3 - H335
STOT RE 2 - H373
Asp. Tox. 1 - H304
Aquatic Chronic 3 - H412

ETHANOL			1-5%
CAS number: 64-17-5	EC number: 200-578-6	REACH registration number: 01-2119457610-43	

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2 - H319

BUTANONE			1-5%
CAS number: 78-93-3	EC number: 201-159-0	REACH registration number: 01-2119457290-43	

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2 - H319
STOT SE 3 - H336

Butylated reaction product0f p-cresol & dicyclopentadiene		<1%
CAS number: 68610-51-5	EC number: 271-867-2	
M factor (Acute) = 1		

Classification
Aquatic Acute 1 - H400
Aquatic Chronic 4 - H413

ROSIN		<1%
CAS number: 8050-09-7	EC number: 232-475-7	

Classification
Skin Sens. 1 - H317

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ETHYLBENZENE			**<1%**
CAS number: 100-41-4	EC number: 202-849-4	REACH registration number: 01-2119489370-35	
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H332 STOT RE 2 - H373 Asp. Tox. 1 - H304			

The full text for all hazard statements is displayed in Section 16.

Composition comments Sprayable Polychloroprene Adhesive

Chemical Nature

chemical nature

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Move affected person to fresh air at once. Get medical attention if any discomfort continues.

Inhalation Move affected person to fresh air at once. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.

Ingestion Do not induce vomiting. Remove affected person from source of contamination. Rinse mouth thoroughly with water. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention immediately.

Skin contact Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.

Eye contact Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

4.2. Most important symptoms and effects, both acute and delayed

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Vapours may cause drowsiness and dizziness.

Ingestion May cause stomach pain or vomiting.

Skin contact Skin irritation.

Eye contact Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

Specific treatments Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. In use may form flammable/explosive vapour-air mixture. Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Carbon dioxide (CO_2). Carbon monoxide (CO). Halogenated hydrocarbons.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Carbon dioxide (CO_2). Carbon monoxide (CO). Hydrogen chloride (HCl).

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Use air-supplied respirator, gloves and protective goggles.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Ensure suitable respiratory protection is worn during removal of spillages in confined areas.

For non-emergency personnel Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

For emergency responders Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Wear protective gloves, eye and face protection.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2. Conditions for safe storage, including any incompatibilities

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Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures between 5°C and 25°C.

Storage class Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description Adhesive.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

DICHLOROMETHANE

Long-term exposure limit (8-hour TWA): WEL 100 ppm(Sk) 350 mg/m3(Sk)
Short-term exposure limit (15-minute): WEL 300 ppm(Sk) 1060 mg/m3(Sk)

XYLENE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m³
Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m³
Sk

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³
Short-term exposure limit (15-minute): WEL

BUTANONE

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 600 mg/m3(Sk)
Short-term exposure limit (15-minute): WEL 300 ppm(Sk) 899 mg/m3(Sk)

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 266 mg/m3(Sk)
Short-term exposure limit (15-minute): WEL 250 ppm(Sk) 333 mg/m3(Sk)

ROSIN

Long-term exposure limit (8-hour TWA): WEL 0.05 mg/m³
Short-term exposure limit (15-minute): WEL 0.15 mg/m³

ETHYLBENZENE

Long-term exposure limit (8-hour TWA): WEL 100 ppm 441 mg/m³
Short-term exposure limit (15-minute): WEL 125 ppm 552 mg/m³
Sk

FORMALDEHYDE ...%

Long-term exposure limit (8-hour TWA): WEL 2 ppm 2.5 mg/m³
Short-term exposure limit (15-minute): WEL 2 ppm 2.5 mg/m³

WEL = Workplace Exposure Limit
Sk = Can be absorbed through the skin.

Ingredient comments WEL = Workplace Exposure Limits

DICHLOROMETHANE (CAS: 75-09-2)

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DNEL

Industry - Inhalation; Long term local effects: 353 mg/m³
Industry - Dermal; Long term local effects: 4750 mg/kg/day
Industry - Inhalation; Short term local effects: 706 mg/m³
Consumer - Inhalation; Long term local effects: 88.3 mg/m³
Consumer - Oral; Short term local effects: 0.06 mg/kg/day
Consumer - Inhalation; Short term local effects: 353 mg/m³
Consumer - Dermal; Short term local effects: 2395 mg/kg/day

PNEC

- Fresh water; 0.54 mg/l
- marine water; 0.194 mg/l
- Intermittent release; 0.27 mg/l
- Sediment (Freshwater); 0.972 mg/kg
- Sediment (Marinewater); 0.349 mg/kg
- STP; 26 mg/l
- Soil; 0.972 mg/kg

XYLENE (CAS: 1330-20-7)

Ingredient comments

WEL = Workplace Exposure Limits

DNEL

Consumer - Dermal; Long term systemic effects: 108 mg/kg/day
Industry - Dermal; Long term systemic effects: 180 mg/kg/day
Consumer - Inhalation; Short term local effects: 174 mg/m³
Consumer - Inhalation; Short term systemic effects: 174 mg/m³
Industry - Inhalation; Short term systemic effects: 289 mg/m³
Industry - Inhalation; Short term local effects: 289 mg/m³
Consumer - Inhalation; Long term systemic effects: 14.8 mg/m³
Industry - Inhalation; Long term systemic effects: 77 mg/m³

PNEC

- Fresh water; 0.327 mg/l
- Soil; 2.31 mg/kg

ETHANOL (CAS: 64-17-5)

DNEL

Consumer - Oral; Long term systemic effects: 87 mg/kg/day
Consumer - Dermal; Long term systemic effects: 206 mg/kg/day
Industry - Dermal; Long term systemic effects: 343 mg/kg/day
Consumer - Inhalation; Short term local effects: 950 mg/m³
Industry - Inhalation; Short term local effects: 1900 mg/m³
Consumer - Inhalation; Long term systemic effects: 114 mg/m³
Industry - Inhalation; Long term systemic effects: 950 mg/m³

PNEC

- Fresh water; 0.96 mg/l
- Sediment (Freshwater); 3.6 mg/kg
- marine water; 0.79 mg/l
- Soil; 0.63 mg/kg

BUTANONE (CAS: 78-93-3)

DNEL

Consumer - Oral; Long term systemic effects: 31 mg/kg/day
Consumer - Dermal; Long term systemic effects: 412 mg/kg/day
Industry - Dermal; Long term systemic effects: 1161 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 106 mg/m³
Industry - Inhalation; Long term systemic effects: 600 mg/m³

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PNEC
- Fresh water; 55.8 mg/l
- marine water; 55.8 mg/l
- Intermittent release; 55.8 mg/l
- STP; 709 mg/l
- Sediment (Marinewater); 284.7 mg/kg
- Soil; 22.5 mg/kg
- Sediment (Freshwater); 284.7 mg/kg

Butylated reaction product0f p-cresol & dicyclopentadiene (CAS: 68610-51-5)

DNEL
Industry - Oral; Long term systemic effects: 0.8 mg/kg/day
Industry - Dermal; Long term systemic effects: 4 mg/kg/day
Industry - Inhalation; Long term systemic effects: 0.35 mg/m³

PNEC
- STP; 150.9 mg/l

METHANOL (CAS: 67-56-1)

DNEL
Consumer - Oral; Short term systemic effects: 8 mg/kg/day
Consumer - Oral; Long term systemic effects: 8 mg/kg/day
Consumer - Dermal; Short term systemic effects: 8 mg/kg/day
Industry - Dermal; Long term systemic effects: 40 mg/kg/day
Industry - Dermal; Short term systemic effects: 40 mg/kg/day
Industry - Inhalation; Short term local effects: 260 mg/m³
Industry - Inhalation; Short term systemic effects: 260 mg/m³
Consumer - Inhalation; Short term local effects: 50 mg/m³
Consumer - Inhalation; Long term systemic effects: 50 mg/m³

PNEC
- Fresh water; 154 mg/l
- marine water; 15.4 mg/l
- STP; 100 mg/l
- Soil; 23.5 mg/kg
- Intermittent release; 1,540 mg/l

PARATERTIARYBUTYLPHENOL (CAS: 98-54-4)

PNEC
- Soil; 0.324 mg/kg
- Fresh water; 0.01 mg/l
- Sediment (Freshwater); 0.975 mg/l
- Sediment (Marinewater); 0.0975 mg/l

ETHYLBENZENE (CAS: 100-41-4)

DNEL
Workers - Inhalation; Short term local effects: 293 mg/m³

PNEC
- marine water; 0.01 mg/l
- Intermittent release; 0.1 mg/l
- Sediment (Marinewater); 1.37 mg/l

8.2. Exposure controls

Protective equipment

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Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Provide adequate ventilation. Avoid inhalation of vapours. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
Eye/face protection	Chemical splash goggles or face shield. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
Hand protection	Wear protective gloves made of the following material: Nitrile rubber. To protect hands from chemicals, gloves should comply with European Standard EN374. When used with mixtures, the protection time of gloves cannot be accurately estimated. The selected gloves should have a breakthrough time of at least 6 hours. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.
Hygiene measures	Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin.
Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.
Thermal hazards	Contact with hot product can cause serious thermal burns.
Environmental exposure controls	Keep container tightly sealed when not in use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid. Heavy.
Colour	Amber. Red.
Odour	Chlorinated hydrocarbons. Pungent.
Odour threshold	Not available. Not available.
pH	Not relevant. Not relevant.
Melting point	Technically not feasible.
Initial boiling point and range	65°C @
Flash point	°C Does not flash.
Evaporation rate	Not available.
Evaporation factor	Not available.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not available.

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Vapour density	Not available.
Relative density	1.23- - 1.24 @ °C
Bulk density	Not relevant.
Solubility(ies)	Not available. Insoluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	400-600 cP @ 20°C
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Refractive index	Not relevant.
Particle size	Not available.
Molecular weight	Not available.
Saturation concentration	Not available.
Critical temperature	Not determined.
Volatile organic compound	This product contains a maximum VOC content of 1046 g/l.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not applicable. No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid	Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid	Avoid contact with the following materials: Alkaline earth metals. Aluminium.

10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Hydrogen chloride (HCl). Halogenated hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects	Suspected of causing cancer.

Acute toxicity - oral

Notes (oral LD_{50})	Not determined.

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Acute toxicity - dermal

Notes (dermal LD_{50})	Not determined.
ATE dermal (mg/kg)	37,729.38

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Not determined.
ATE inhalation (vapours mg/l)	342.99

Carcinogenicity

Carcinogenicity	Suspected of causing cancer.

General information	Known or suspected carcinogen for humans. May cause damage to organs through prolonged or repeated exposure.
Inhalation	Irritating to respiratory system.
Ingestion	May cause stomach pain or vomiting.
Skin contact	Product has a defatting effect on skin. Irritating to skin.
Eye contact	Causes serious eye irritation.
Acute and chronic health hazards	Inhalation May cause respiratory system irritation. Prolonged and repeated contact with solvents over a long period may lead to permanent health problems. Prolonged or repeated exposure to vapours in high concentrations may cause the following adverse effects: Nausea, vomiting. Headache. Irritating to skin. Product has a defatting effect on skin. Irritating to eyes. Known or suspected carcinogen for humans.
Route of exposure	Inhalation Skin absorption
Target organs	No specific target organs known.
Medical symptoms	Symptoms following overexposure to vapour may include the following: Difficulty in breathing. Dizziness. Dry skin. Headache. Nausea, vomiting.

Toxicological information on ingredients.

DICHLOROMETHANE

Other health effects	Suspect Cancer Hazard.

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,500.0
Species	Rat
ATE oral (mg/kg)	2,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,500.0
Species	Rat
ATE dermal (mg/kg)	2,500.0

Acute toxicity - inhalation

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Acute toxicity inhalation (LC_{50} vapours mg/l)	49.0
Species	Rat
ATE inhalation (vapours mg/l)	49.0

XYLENE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,300.0
Species	Rat
ATE oral (mg/kg)	4,300.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rabbit
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	10.0
Species	Rat
ATE inhalation (vapours mg/l)	10.0

Carcinogenicity

IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

ETHANOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	7,060.0
Species	Rat
ATE oral (mg/kg)	7,060.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,050.0
Species	Rabbit
ATE dermal (mg/kg)	2,050.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	20,000.0

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Species	Rat
ATE inhalation (vapours mg/l)	20,000.0

BUTANONE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,193.0
Species	Rat
ATE oral (mg/kg)	2,193.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,050.0
Species	Rabbit
ATE dermal (mg/kg)	5,050.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	5,000.0
Species	Rat
ATE inhalation (vapours mg/l)	5,000.0

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Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,500.0
Species	Rat
ATE oral (mg/kg)	5,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,500.0
Species	Rabbit
ATE dermal (mg/kg)	5,500.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	163.0
Species	Rat
ATE inhalation (dusts/mists mg/l)	163.0

Specific target organ toxicity - repeated exposure

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STOT - repeated exposure NOAEL 160.8 mg/l/6hr/day, Dermal, Rat

PARATERTIARYBUTYLPHENOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,660.0
Species	Rat
ATE oral (mg/kg)	5,660.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	4,100.0
Species	Rabbit
ATE dermal (mg/kg)	4,100.0

ETHYLBENZENE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	3,500.0
Species	Rat
ATE oral (mg/kg)	3,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	4,100.0
Species	Rabbit
ATE dermal (mg/kg)	4,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} gases ppmV)	4,000.0
Species	Rat
ATE inhalation (gases ppm)	4,000.0

Carcinogenicity

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

SECTION 12: Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

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Acute toxicity - aquatic invertebrates	Not determined.
Acute toxicity - aquatic plants	Not determined.
Acute toxicity - microorganisms	Not determined.
Acute toxicity - terrestrial	Not determined.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage	Not determined.
Short term toxicity - embryo and sac fry stages	Not determined.
Chronic toxicity - aquatic invertebrates	Not determined.

Ecological information on ingredients.

DICHLOROMETHANE

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: 193 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 220 mg/l, Daphnia magna
Acute toxicity - aquatic plants	NOEC, : 550 mg/l, Scenedesmus subspicatus EC_{50}, 96 hours: 665 mg/l, Selenastrum capricornutum

XYLENE

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: 8.9 - 16.4 mg/l, Pimephales promelas (Fat-head Minnow) EC_{50}, 96 hours: 86 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 3.2- 9.5 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 48 hours: 1 - 10 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	, : ,

ETHANOL

Acute aquatic toxicity

Acute toxicity - fish	LC50, 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe) LC_{50}, 96 hours: 1030 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, >: > 100 mg/l, Freshwater algae

BUTANONE

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Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: 2993 mg/l, Pimephales promelas (Fat-head Minnow) LC50, 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 308 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 96 hours: 2029 , Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC_{50}, 96 hours: > 50 mg/l, Activated sludge

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Acute aquatic toxicity

$LE(C)_{50}$	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC50, 48 hours: > 1000 mg/l, Leuciscus idus (Golden orfe) , 96 hours: > 0.2 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 0.2 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: > 0.2 mg/l, Selenastrum capricornutum NOEC, 72 hours: > 0.2 mg/l, Selenastrum capricornutum

PARATERTIARYBUTYLPHENOL

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: > 4.71 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 3.5 mg/l, Daphnia magna

ETHYLBENZENE

Acute aquatic toxicity

Acute toxicity - fish	LC50, 48 hours: 44 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 75 mg/l, Daphnia magna
Acute toxicity - aquatic plants	, : ,
Acute toxicity - microorganisms	, : ,

12.2. Persistence and degradability

Persistence and degradability	The product is expected to be slowly biodegradable.
Phototransformation	Not relevant.
Stability (hydrolysis)	Not determined.
Biodegradation	Not determined.

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Biological oxygen demand Not determined.

Chemical oxygen demand Not determined.

Ecological information on ingredients.

DICHLOROMETHANE

Persistence and degradability The product is potentially degradable.

XYLENE

Biodegradation Water - Degradation (%) 60: > 28 days
readily biodegradable

ETHANOL

Biodegradation - Degradation (%) 70: >

BUTANONE

Persistence and degradability The product is biodegradable.

Biodegradation Water - Degradation (%) 98: 28 days
readily biodegradable

Butylated reaction product0f p-cresol & dicyclopentadiene

Biodegradation Degradation (%)
- 1: 28 days
Not readily biodegradeable

ETHYLBENZENE

Biodegradation Water - Degradation (%) 70 - 80: 28 days
readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not available.

Ecological information on ingredients.

DICHLOROMETHANE

Bioaccumulative potential BCF: 0.91,

BUTANONE

Bioaccumulative potential The product is not bioaccumulating.

Butylated reaction product0f p-cresol & dicyclopentadiene

Partition coefficient log Pow: 7.56

12.4. Mobility in soil

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Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Adsorption/desorption coefficient Not determined.

Henry's law constant Not determined.

Surface tension Not determined.

Ecological information on ingredients.

BUTANONE

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

DICHLOROMETHANE

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

XYLENE

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

BUTANONE

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1593

UN No. (IMDG) 1593

UN No. (ICAO) 1593

14.2. UN proper shipping name

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Proper shipping name (ADR/RID)	DICHLOROMETHANE
Proper shipping name (IMDG)	DICHLOROMETHANE
Proper shipping name (ICAO)	DICHLOROMETHANE
Proper shipping name (ADN)	DICHLOROMETHANE

14.3. Transport hazard class(es)

ADR/RID class	6.1
ADR/RID label	6.1
IMDG class	6.1
ICAO class/division	6.1

Transport labels

14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-A, S-A
Emergency Action Code	2Z
Hazard Identification Number (ADR/RID)	60
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

SECTION 15: Regulatory information

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

National regulations	Health and Safety at Work etc. Act 1974 (as amended). Control of Substances Hazardous to Health Regulations 2002 (as amended). EH40/2005 Workplace exposure limits.

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EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Guidance	Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG228. Approved Classification and Labelling Guide (Sixth edition) L131.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	ATE: Acute Toxicity Estimate. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. GHS: Globally Harmonized System. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. Kow: Octanol-water partition coefficient. LC_{50}: Lethal Concentration to 50 % of a test population. LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose). PNEC: Predicted No Effect Concentration. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. SVHC: Substances of Very High Concern. vPvB: Very Persistent and Very Bioaccumulative. IARC: International Agency for Research on Cancer. MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. cATpE: Converted Acute Toxicity Point Estimate. BCF: Bioconcentration Factor. BOD: Biochemical Oxygen Demand. EC_{50}: 50% of maximal Effective Concentration. LOAEC: Lowest Observed Adverse Effect Concentration. LOAEL: Lowest Observed Adverse Effect Level. NOAEL: No Observed Adverse Effect Level. NOEC: No Observed Effect Concentration. DMEL: Derived Minimal Effect Level. UN: United Nations. IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).

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Key literature references and sources for data	Dangerous Properties of Industrial Materials Report, N.Sax et.al.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	08/10/2018
Revision	17
Supersedes date	03/10/2018
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H373 May cause damage to organs (Hearing organs) through prolonged or repeated exposure. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life.