



Safety Data Sheet

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|------------------------|------------|-------------------------|------------|
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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

3M™ Spray Adhesive 76 (PL 4439)

Product Identification Numbers

YP-2080-6116-5

7000116779

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

Identified uses

Adhesive

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

The aspiration hazard classification is not required because the product is an aerosol.

CLASSIFICATION:

Aerosol, Category 1 - Aerosol 1; H222, H229

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336

Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements**CLP REGULATION (EC) No 1272/2008****SIGNAL WORD**

DANGER.

Symbols

GHS02 (Flame) |GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms**Ingredients:**

| Ingredient | CAS Nbr | EC No. | % by Wt |
|----------------|---------|-----------|---------|
| methyl acetate | 79-20-9 | 201-185-2 | < 30 |

HAZARD STATEMENTS:

| | |
|------|--|
| H222 | Extremely flammable aerosol. |
| H229 | Pressurised container: may burst if heated. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |

PRECAUTIONARY STATEMENTS**Prevention:**

| | |
|------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P211 | Do not spray on an open flame or other ignition source. |
| P251 | Do not pierce or burn, even after use. |

Response:

| | |
|--------------------|--|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
|--------------------|--|

Storage:

| | |
|-------------|--|
| P410 + P412 | Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. |
|-------------|--|

Disposal:

| | |
|------|--|
| P501 | Dispose of contents/container in accordance with applicable local/regional/national/international regulations. |
|------|--|

45% of the mixture consists of components of unknown acute oral toxicity.

Contains 2% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Ingredient | Identifier(s) | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|--|---------|---|
| dimethyl ether | (CAS-No.) 115-10-6 (EC-No.) 204-065-8 | 40 - 60 | Liquified gas, H280 Nota U |
| methyl acetate | (CAS-No.) 79-20-9 (EC-No.) 201-185-2 (REACH-No.) 01-2119459211-47 | < 30 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066 |
| cyclohexane | (CAS-No.) 110-82-7 (EC-No.) 203-806-2 (REACH-No.) 01-2119463273-41 | 7 - 13 | Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1 |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | (CAS-No.) 31393-98-3 | 3 - 7 | Aquatic Chronic 4, H413 |
| BENZENE, 1-ETHENYL-4-METHYL-, POLYMER WITH (1-METHYLETHENYL)BENZENE | (CAS-No.) 100199-62-0 | < 3 | Substance not classified as hazardous |
| ALPHA-METHYLSTYRENE-VINYLTOLUENE COPOLYMER | (CAS-No.) 9017-27-0 | < 3 | Substance not classified as hazardous |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | (EC-No.) 920-901-0 | < 3 | Asp. Tox. 1, H304 EUH066 |

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

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

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance

Hydrocarbons.
formaldehyde
Carbon monoxide
Carbon dioxide.

Condition

During combustion.
During combustion.
During combustion.
During combustion.

5.3. Advice for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Cover spill area with a fire-extinguishing foam. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears

dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. Do not use in a confined area with minimal air exchange. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store away from heat. Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | CAS Nbr | Agency | Limit type | Additional comments |
|----------------|----------|--------|---|---------------------|
| cyclohexane | 110-82-7 | UK HSC | TWA:350 mg/m ³ (100 ppm);STEL:1050 mg/m ³ (300 ppm) | |
| dimethyl ether | 115-10-6 | UK HSC | TWA:766 mg/m ³ (400 ppm);STEL:958 mg/m ³ (500 ppm) | |
| methyl acetate | 79-20-9 | UK HSC | TWA:616 mg/m ³ (200 ppm);STEL:770 mg/m ³ (250 ppm) | |

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Derived no effect level (DNEL)

| Ingredient | Degradation Product | Population | Human exposure pattern | DNEL |
|-------------|---------------------|------------|---------------------------------------|------------------|
| cyclohexane | | Worker | Dermal, Long-term exposure (8 hours), | 2,016 mg/kg bw/d |

| | | | | |
|-------------|--|--------|--|-----------------------|
| | | | Systemic effects | |
| cyclohexane | | Worker | Inhalation, Long-term exposure (8 hours), Local effects | 700 mg/m ³ |
| cyclohexane | | Worker | Inhalation, Long-term exposure (8 hours), Systemic effects | 700 mg/m ³ |
| cyclohexane | | Worker | Inhalation, Short-term exposure, Local effects | 700 mg/m ³ |
| cyclohexane | | Worker | Inhalation, Short-term exposure, Systemic effects | 700 mg/m ³ |

Predicted no effect concentrations (PNEC)

| Ingredient | Degradation Product | Compartment | PNEC |
|-------------|---------------------|--------------------------------|------------------|
| cyclohexane | | Freshwater | 0.207 mg/l |
| cyclohexane | | Freshwater sediments | 3.627 mg/kg d.w. |
| cyclohexane | | Intermittent releases to water | 0.207 mg/l |
| cyclohexane | | Marine water | 0.207 mg/l |

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

Do not remain in area where available oxygen may be reduced. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect vented goggles.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended:

| Material | Thickness (mm) | Breakthrough Time |
|-----------------|-------------------|-------------------|
| Nitrile rubber. | No data available | No data available |

Applicable Norms/Standards

Use gloves tested to EN 374

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

Half facepiece or full facepiece supplied-air respirator

For questions about suitability for a specific application, consult with your respirator manufacturer.

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136

Use a respirator conforming to EN 140 or EN 136: filter types A & P

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state | Liquid. |
| Specific Physical Form: | Aerosol |
| Colour | Colourless |
| Odor | Sweet Odor |
| Odour threshold | <i>No data available.</i> |
| Melting point/freezing point | <i>Not applicable.</i> |
| Boiling point/boiling range | <i>No data available.</i> |
| Flammability (solid, gas) | Not applicable. |
| Flammable Limits(LEL) | <i>No data available.</i> |
| Flammable Limits(UEL) | <i>No data available.</i> |
| Flash point | -42 °C |
| Autoignition temperature | <i>No data available.</i> |
| Decomposition temperature | <i>Not applicable.</i> |
| pH | <i>substance/mixture is non-soluble (in water)</i> |
| Kinematic Viscosity | <i>Not applicable.</i> |
| Water solubility | <i>No data available.</i> |
| Solubility- non-water | <i>No data available.</i> |
| Partition coefficient: n-octanol/water | <i>No data available.</i> |
| Vapour pressure | <i>No data available.</i> |
| Density | 0.7 g/ml |
| Relative density | 0.7 [Ref Std: WATER=1] |
| Relative Vapor Density | <i>No data available.</i> |

9.2. Other information**9.2.2 Other safety characteristics**

| | |
|--------------------------------------|---------------------------|
| EU Volatile Organic Compounds | <i>No data available.</i> |
| Evaporation rate | <i>No data available.</i> |
| Percent volatile | 85 - 95 % |

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

Sparks and/or flames.

10.5 Incompatible materials

Strong acids.

10.6 Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

Simple asphyxiation: Signs/symptoms may include increased heart rate, rapid respirations, drowsiness, headache, incoordination, altered judgement, nausea, vomiting, lethargy, seizures, coma, and may be fatal. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact

Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness.

Eye contact

Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

| Name | Route | Species | Value |
|---|-----------------------------|------------------------|--|
| Overall product | Dermal | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| dimethyl ether | Inhalation-Gas (4 hours) | Rat | LC50 164,000 ppm |
| methyl acetate | Dermal | Rat | LD50 > 2,000 mg/kg |
| methyl acetate | Inhalation-Vapour (4 hours) | Rat | LC50 > 49 mg/l |
| methyl acetate | Ingestion | Rat | LD50 > 5,000 mg/kg |
| cyclohexane | Dermal | Rat | LD50 > 2,000 mg/kg |
| cyclohexane | Inhalation-Vapour (4 hours) | Rat | LC50 > 32.9 mg/l |
| cyclohexane | Ingestion | Rat | LD50 6,200 mg/kg |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | Ingestion | Rat | LD50 > 2,000 mg/kg |
| BENZENE, 1-ETHENYL-4-METHYL-, POLYMER WITH (1-METHYLETHENYL)BENZENE | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| BENZENE, 1-ETHENYL-4-METHYL-, POLYMER WITH (1-METHYLETHENYL)BENZENE | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| ALPHA-METHYLSTYRENE-VINYLTOLUENE COPOLYMER | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| ALPHA-METHYLSTYRENE-VINYLTOLUENE COPOLYMER | Ingestion | Rat | LD50 > 10,000 mg/kg |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Inhalation-Vapour | | LC50 estimated to be 20 - 50 mg/l |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Ingestion | Rat | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|---------------|---------------------------|
| methyl acetate | Rabbit | No significant irritation |
| cyclohexane | Rabbit | Mild irritant |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | In vitro data | No significant irritation |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Rabbit | Minimal irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|----------------|---------|-------------------|
| methyl acetate | Rabbit | Moderate irritant |
| cyclohexane | Rabbit | Mild irritant |

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| | | |
|---|---------------|---------------------------|
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | In vitro data | No significant irritation |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Rabbit | Mild irritant |

Skin Sensitisation

| Name | Species | Value |
|---|-------------------------|----------------|
| methyl acetate | Human | Not classified |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | Multiple animal species | Not classified |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Guinea pig | Not classified |

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is not sufficient for classification.

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|--|
| dimethyl ether | In Vitro | Not mutagenic |
| dimethyl ether | In vivo | Not mutagenic |
| methyl acetate | In Vitro | Not mutagenic |
| methyl acetate | In vivo | Not mutagenic |
| cyclohexane | In Vitro | Not mutagenic |
| cyclohexane | In vivo | Some positive data exist, but the data are not sufficient for classification |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | In Vitro | Not mutagenic |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | In Vitro | Not mutagenic |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | In vivo | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|--|----------------|---------------|------------------|
| dimethyl ether | Inhalation | Rat | Not carcinogenic |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Not specified. | Not available | Not carcinogenic |

Reproductive Toxicity**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test result | Exposure Duration |
|--|----------------|--|---------------|------------------|----------------------|
| dimethyl ether | Inhalation | Not classified for development | Rat | NOAEL 40,000 ppm | during organogenesis |
| cyclohexane | Inhalation | Not classified for female reproduction | Rat | NOAEL 24 mg/l | 2 generation |
| cyclohexane | Inhalation | Not classified for male reproduction | Rat | NOAEL 24 mg/l | 2 generation |
| cyclohexane | Inhalation | Not classified for development | Rat | NOAEL 6.9 mg/l | 2 generation |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Not specified. | Not classified for female reproduction | Not available | NOAEL NA | 1 generation |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Not specified. | Not classified for male reproduction | Not available | NOAEL NA | 28 days |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Not specified. | Not classified for development | Not available | NOAEL NA | during gestation |

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure |
|------|-------|-----------------|-------|---------|-------------|----------|
|------|-------|-----------------|-------|---------|-------------|----------|

| | | | | | | Duration |
|----------------|------------|-----------------------------------|--|------------------------|---------------------|-----------------|
| dimethyl ether | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Rat | LOAEL 10,000 ppm | 30 minutes |
| dimethyl ether | Inhalation | cardiac sensitisation | Some positive data exist, but the data are not sufficient for classification | Dog | NOAEL 100,000 ppm | 5 minutes |
| methyl acetate | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| methyl acetate | Inhalation | respiratory irritation | May cause respiratory irritation | Human and animal | NOAEL Not available | |
| methyl acetate | Inhalation | blindness | Not classified | | NOAEL Not available | |
| methyl acetate | Ingestion | central nervous system depression | May cause drowsiness or dizziness | | NOAEL Not available | |
| cyclohexane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| cyclohexane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human and animal | NOAEL Not available | |
| cyclohexane | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Professional judgement | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|--------------|---|--|----------------|---------------------|--------------------------|
| dimethyl ether | Inhalation | hematopoietic system | Not classified | Rat | NOAEL 25,000 ppm | 2 years |
| dimethyl ether | Inhalation | liver | Not classified | Rat | NOAEL 20,000 ppm | 30 weeks |
| methyl acetate | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1.1 mg/l | 28 days |
| methyl acetate | Inhalation | endocrine system hematopoietic system liver immune system kidney and/or bladder | Not classified | Rat | NOAEL 6.1 mg/l | 28 days |
| cyclohexane | Inhalation | liver | Not classified | Rat | NOAEL 24 mg/l | 90 days |
| cyclohexane | Inhalation | auditory system | Not classified | Rat | NOAEL 1.7 mg/l | 90 days |
| cyclohexane | Inhalation | kidney and/or bladder | Not classified | Rabbit | NOAEL 2.7 mg/l | 10 weeks |
| cyclohexane | Inhalation | hematopoietic system | Not classified | Mouse | NOAEL 24 mg/l | 14 weeks |
| cyclohexane | Inhalation | peripheral nervous system | Not classified | Rat | NOAEL 8.6 mg/l | 30 weeks |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | Ingestion | heart gastrointestinal tract hematopoietic system liver nervous system eyes kidney and/or bladder | Not classified | Rat | NOAEL 331 mg/kg/day | 90 days |

Aspiration Hazard

| Name | Value |
|--|-------------------|
| cyclohexane | Aspiration hazard |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Aspiration hazard |

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

| Material | CAS # | Organism | Type | Exposure | Test endpoint | Test result |
|---|-------------|------------------|---|----------|--------------------------------|--------------|
| dimethyl ether | 115-10-6 | Bacteria | Experimental | N/A | EC10 | >1,600 mg/l |
| dimethyl ether | 115-10-6 | Guppy | Experimental | 96 hours | LC50 | >4,100 mg/l |
| dimethyl ether | 115-10-6 | Water flea | Experimental | 48 hours | EC50 | >4,400 mg/l |
| methyl acetate | 79-20-9 | Bacteria | Experimental | 16 hours | EC50 | 6,000 mg/l |
| methyl acetate | 79-20-9 | Green algae | Experimental | 72 hours | ErC50 | >120 mg/l |
| methyl acetate | 79-20-9 | Water flea | Experimental | 48 hours | EC50 | 1,026.7 mg/l |
| methyl acetate | 79-20-9 | Green algae | Experimental | 72 hours | NOEC | 120 mg/l |
| cyclohexane | 110-82-7 | Bacteria | Experimental | 24 hours | IC50 | 97 mg/l |
| cyclohexane | 110-82-7 | Fathead minnow | Experimental | 96 hours | LC50 | 4.53 mg/l |
| cyclohexane | 110-82-7 | Water flea | Experimental | 48 hours | EC50 | 0.9 mg/l |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | 31393-98-3 | Activated sludge | Experimental | 3 hours | NOEC | 1,000 mg/l |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | 31393-98-3 | Water flea | Experimental | 48 hours | No tox obs at lmt of water sol | >100 mg/l |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | 31393-98-3 | Water flea | Endpoint not reached | 21 days | EL10 | >100 mg/l |
| ALPHA-METHYLSTYRENE-VINYLTOLUENE COPOLYMER | 9017-27-0 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| BENZENE, 1-ETHENYL-4- | 100199-62-0 | N/A | Data not available or insufficient for | N/A | N/A | N/A |

| | | | | | | |
|--|-----------|---------------|----------------|----------|------|-------------|
| METHYL-, POLYMER WITH (1-METHYLETHENYL) BENZENE | | | classification | | | |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | 920-901-0 | Green algae | Estimated | 72 hours | EL50 | >1,000 mg/l |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | 920-901-0 | Rainbow trout | Estimated | 96 hours | LL50 | >1,000 mg/l |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | 920-901-0 | Water flea | Estimated | 48 hours | EL50 | >1,000 mg/l |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | 920-901-0 | Green algae | Estimated | 72 hours | NOEL | 1,000 mg/l |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|-------------|------------------------------------|----------|-------------------------------|-------------------|-------------------------------------|
| dimethyl ether | 115-10-6 | Experimental Biodegradation | 28 days | BOD | 5 %BOD/ThO D | OECD 301D - Closed bottle test |
| dimethyl ether | 115-10-6 | Experimental Photolysis | | Photolytic half-life (in air) | 12.4 days (t 1/2) | |
| methyl acetate | 79-20-9 | Experimental Biodegradation | 28 days | BOD | 70 %BOD/ThO D | OECD 301D - Closed bottle test |
| cyclohexane | 110-82-7 | Experimental Biodegradation | 28 days | BOD | 77 %BOD/ThO D | OECD 301F - Manometric respirometry |
| cyclohexane | 110-82-7 | Experimental Photolysis | | Photolytic half-life (in air) | 4.14 days (t 1/2) | |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | 31393-98-3 | Experimental Biodegradation | 28 days | BOD | 4 %BOD/ThO D | OECD 301D - Closed bottle test |
| ALPHA-METHYLSTYRENE-VINYLTOLUENE COPOLYMER | 9017-27-0 | Modeled Biodegradation | 28 days | BOD | 1 %BOD/ThO D | Catalogic™ |
| BENZENE, 1-ETHENYL-4-METHYL-, POLYMER WITH (1-METHYLETHENYL)BENZENE | 100199-62-0 | Data not available or insufficient | N/A | N/A | N/A | N/A |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | 920-901-0 | Estimated Biodegradation | 28 days | BOD | 31.3 %BOD/ThOD | OECD 301F - Manometric respirometry |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|---|------------|---|----------|------------------------|-------------|--------------------------|
| dimethyl ether | 115-10-6 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| methyl acetate | 79-20-9 | Experimental Bioconcentration | | Log Kow | 0.18 | |
| cyclohexane | 110-82-7 | Experimental BCF - Fish | 56 days | Bioaccumulation factor | 129 | OECD305-Bioconcentration |
| 2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane | 31393-98-3 | Experimental Bioconcentration | | Log Kow | 7.41 | |
| ALPHA-METHYLSTYRENE- | 9017-27-0 | Modeled Bioconcentration | | Bioaccumulation factor | <=79 | Catalogic™ |

| | | | | | | |
|---|-------------|---|-----|-----|-----|-----|
| VINYLTOLUENE COPOLYMER | | | | | | |
| BENZENE, 1-ETHENYL-4-METHYL-, POLYMER WITH (1-METHYLETHENYL)BENZENE | 100199-62-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | 920-901-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |

12.4. Mobility in soil

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|----------------|----------|--------------------------|------------|-------------|-----------|
| dimethyl ether | 115-10-6 | Modeled Mobility in Soil | Koc | 3 l/kg | Episuite™ |

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

- 08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
- 16 05 04* Gases in pressure containers (including halons) containing dangerous substances
- 20 01 27* Paint, inks, adhesives and resins containing dangerous substances

EU waste code (product container after use)

- 15 01 04 Metallic packaging

SECTION 14: Transportation information

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|---|--|--|--|
| 14.1 UN number or ID number | UN1950 | UN1950 | UN1950 |
| 14.2 UN proper shipping name | AEROSOLS | AEROSOLS, FLAMMABLE | AEROSOLS |
| 14.3 Transport hazard class(es) | 2.1 | 2.1 | 2.1 |
| 14.4 Packing group | Not applicable. | Not applicable. | Not applicable. |
| 14.5 Environmental hazards | Not Environmentally Hazardous | Not applicable | Not a Marine Pollutant |
| 14.6 Special precautions for user | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. |
| 14.7 Marine Transport in bulk according to IMO instruments | No data available. | No data available. | No data available. |
| Control Temperature | No data available. | No data available. | No data available. |
| Emergency Temperature | No data available. | No data available. | No data available. |
| ADR Classification Code | 5F | Not applicable. | Not applicable. |
| IMDG Segregation Code | Not applicable. | Not applicable. | NONE |

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

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

Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

Ingredient
cyclohexane

CAS Nbr
110-82-7

Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

Global inventory status

Contact 3M for more information.

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

| Dangerous Substances | Identifier(s) | Qualifying quantity (tonnes) for the application of | |
|----------------------|---------------|---|-------------------------|
| | | Lower-tier requirements | Upper-tier requirements |
| cyclohexane | 110-82-7 | 10 | 50 |
| dimethyl ether | 115-10-6 | 10 | 50 |
| methyl acetate | 79-20-9 | 10 | 50 |

Regulation (EU) No 649/2012

No chemicals listed

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information**List of relevant H statements**

| | |
|--------|---|
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| H222 | Extremely flammable aerosol. |
| H225 | Highly flammable liquid and vapour. |
| H229 | Pressurised container: may burst if heated. |
| H280 | Contains gas under pressure; may explode if heated. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H413 | May cause long lasting harmful effects to aquatic life. |

Revision information:

EU Section 09: pH information information was added.
 Industrial Use of Adhesives and Sealants: Section 16: Annex information was added.
 Professional Use of Adhesives: Section 16: Annex information was added.
 CLP Remark(phrase) information was deleted.
 Label: CLP Classification information was modified.
 Label: CLP Percent Unknown information was modified.
 Label: CLP Precautionary - Prevention information was modified.
 Label: CLP Precautionary - Storage information was modified.
 Section 03: Composition table % Column heading information was added.
 Section 3: Composition/ Information of ingredients table information was modified.
 Section 03: Substance not applicable information was added.

Section 04: Information on toxicological effects information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 8: 8.2. Exposure controls information information was added.
Section 8: 8.2.3. Environmental exposure controls information information was added.
Section 8: DNEL table row information was added.
Section 8: PNEC table row information was added.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was added.
Section 11: Target Organs - Repeated Table information was deleted.
Section 12: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: Mobility in soil information information was added.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12: Bioaccumulative potential information information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.
Section 14 Packing Group – Main Heading information was added.
Section 14 Packing Group – Regulation Data information was added.
Section 14 Proper Shipping Name information was added.
Section 14 Regulations – Main Headings information was added.
Section 14 Segregation – Regulation Data information was added.
Section 14 Segregation Code – Main Heading information was added.
Section 14 Special Precautions – Main Heading information was added.
Section 14 Special Precautions – Regulation Data information was added.
Section 14 Transport in bulk – Regulation Data information was added.

Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was added.

Section 14 UN Number Column data information was added.

Section 14 UN Number information was added.

Section 15: Regulations - Inventories information was added.

Section 15: Seveso Substance Text information was added.

Annex: Prediction of exposure statement information was added.

Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

Section 2: No PBT/vPvB information available warning information was added.

Annex

| | |
|---|--|
| 1. Title | |
| Substance identification | cyclohexane; EC No. 203-806-2; CAS Nbr 110-82-7; |
| Exposure Scenario Name | Industrial Use of Adhesives and Sealants |
| Lifecycle Stage | Use at industrial sites |
| Contributing activities | PROC 07 -Industrial spraying ERC 04 -Use of non-reactive processing aid at industrial site (no inclusion into or onto article) |
| Processes, tasks and activities covered | Application of product. |
| 2. Operational conditions and risk management measures | |
| Operating Conditions | Physical state: Liquid. General operating conditions: Assumes use at not more than 20°C above ambient temperature; Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 100 days per year; Indoor use; Outdoor use; |
| Risk management measures | Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour); Provide extract ventilation to points where emissions occur; Environmental: None needed; |
| Waste management measures | Avoid release to the environment. Refer to special instructions / safety data sheet.; Do not apply industrial sludge to natural soils; Do not release to waterways or sewers; Prevent discharge of undissolved substance to or recover from wastewater; |
| 3. Prediction of exposure | |
| Prediction of exposure | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

| | |
|---------------------------------|--|
| 1. Title | |
| Substance identification | cyclohexane; EC No. 203-806-2; CAS Nbr 110-82-7; |
| Exposure Scenario Name | Professional Use of Adhesives |
| Lifecycle Stage | Widespread use by professional workers |

| | |
|---|---|
| Contributing activities | PROC 11 -Non industrial spraying ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC 08d -Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) |
| Processes, tasks and activities covered | Application of product. |
| 2. Operational conditions and risk management measures | |
| Operating Conditions | Physical state: Liquid. General operating conditions: Assumes use at not more than 20°C above ambient temperature; Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 365 days per year; Indoor use; Outdoor use; |
| Risk management measures | Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Ventilated Process Enclosures; Environmental: None needed; |
| Waste management measures | Avoid release to the environment. Refer to special instructions / safety data sheet.; |
| 3. Prediction of exposure | |
| Prediction of exposure | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

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