



Safety Data Sheet

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| Revision date: | 07/11/2012 | Supersedes date: | 17/05/2012 |
| Transportation version number: | 1.00 (17/11/2010) | | |

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(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

Product identification numbers

YP-2080-6128-0

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

Identified uses

Aerosol Adhesive.

1.3. Details of the supplier of the substance or mixture

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.

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

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive

Indication of danger

Extremely flammable; F+; R12

R66

R67

Dangerous for the environment; N; R51/53

For full text of R phrases, see Section 16.

2.2. Label elements

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)**Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive****Symbol(s)**

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Contains:

No ingredients are assigned to the label.

Risk phrases

| | |
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| R12 | Extremely flammable. |
| R66 | Repeated exposure may cause skin dryness or cracking. |
| R67 | Vapours may cause drowsiness and dizziness. |
| R51/53 | Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. |

Safety phrases

| | |
|------|-------------------------------------------------------------------------------------|
| S16 | Keep away from sources of ignition - No Smoking. |
| S23C | Do not breathe vapour or spray. |
| S51 | Use only in well ventilated areas. |
| S61 | Avoid release to the environment. Refer to special instructions/safety data sheets. |
| S2 | Keep out of the reach of children. |

Special provisions concerning the labelling of certain substances

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material.

Notes on labelling

R65 is not required on the label because the product is an aerosol.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

| Ingredient | CAS Nbr | EU Inventory | % by Wt | Classification |
|----------------|----------|------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Dimethyl Ether | 115-10-6 | EINECS 204-065-8 | 40 - 60 | F+:R12 (EU) Flam. Gas 1, H220; Liquified gas, H280 - Nota U (CLP) |
| Pentane | 109-66-0 | EINECS 203-692-4 | 10 - 30 | F+:R12; Xn:R65; N:R51/53; R66; R67 - Nota 4,C (EU) Flam. Liq. 2, H225; Asp. Tox. 1, H304; STOT SE 3, H336; EUH066; Aquatic Chronic 2, |

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

| | | | | |
|-----------------|--------------|------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | H411 - Nota C (CLP) |
| Non-volatiles | Trade Secret | | 7 - 13 | |
| Acetone | 67-64-1 | EINECS 200-662-2 | 7 - 13 | F:R11; Xi:R36; R66; R67 (EU) Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336; EUH066 (CLP) |
| Cyclohexane | 110-82-7 | EINECS 203-806-2 | 1 - 10 | F:R11; Xn:R65; Xi:R38; N:R50/53; R67 - Nota 4 (EU) 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 (CLP) Aquatic Acute 1, H400 (Self Classified) |
| 2-methyl butane | 78-78-4 | EINECS 201-142-8 | 1 - 10 | F+:R12; Xn:R65; N:R51/53; R66; R67 - Nota 4,C (EU) Flam. Liq. 1, H224; Asp. Tox. 1, H304; STOT SE 3, H336; EUH066; Aquatic Chronic 2, H411 (CLP) |

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

Please refer to section 15 for the any applicable Notas that have been applied to the above components

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****Eye contact**

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

Skin contact

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

Inhalation

Remove person to fresh air. 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

See Section 11.1 Information on toxicological effects

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

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: Fire-fighting measures**5.1. Extinguishing media**

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

In case of fire: Use a fire fighting agent suitable for flammable liquids and solids such as dry chemical or carbon dioxide.

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

| <u>Substance</u> | <u>Condition</u> |
|------------------|--------------------|
| Aldehydes. | During combustion. |
| Hydrocarbons. | During combustion. |
| Formaldehyde | During combustion. |
| Carbon monoxide. | During combustion. |
| Carbon dioxide. | 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.

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. 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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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. Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. 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 toxic, corrosivity or flammability 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

Vapours may travel long distances along the ground or floor to an ignition source and flash back. For industrial or professional use only. Do not use in a confined area or areas with little or no air movement. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: 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 release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

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

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| Ingredient | CAS Nbr | ERROR: Dataview DV_EU_GC_OEL_DATA_Avail not found. | Limit type | Additional comments |
|-----------------|----------|----------------------------------------------------|-----------------------------------------------------------------------------|---------------------|
| Pentane | 109-66-0 | Health and Safety Comm. (UK) | TWA:1800 mg/m ³ (600 ppm) | |
| Cyclohexane | 110-82-7 | Health and Safety Comm. (UK) | TWA:350 mg/m ³ (100 ppm);STEL:1050 mg/m ³ (300 ppm) | |
| Dimethyl Ether | 115-10-6 | Health and Safety Comm. (UK) | TWA:766 mg/m ³ (400 ppm);STEL:958 mg/m ³ (500 ppm) | |
| Acetone | 67-64-1 | Health and Safety Comm. (UK) | TWA:1210 mg/m ³ (500 ppm);STEL:3620 mg/m ³ (1500 ppm) | |
| 2-methyl butane | 78-78-4 | Health and Safety Comm. (UK) | TWA:1800 mg/m ³ (600 ppm) | |

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mg/m³: milligrams per cubic metre

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8.2. Exposure controls

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

Wear eye/face protection.

The following eye protection(s) are recommended: Indirect vented goggles.

Skin/hand protection

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

Respiratory protection

Wear respiratory protection if ventilation is inadequate to prevent overexposure.

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

Half facepiece or full facepiece supplied-air respirator

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

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | |
|-----------------------------------------------|-------------------------------------------------|
| Physical state | Liquid. |
| Specific Physical Form: | Aerosol |
| Appearance/Odour | Solvent odour; Clear |
| pH | <i>Not applicable.</i> |
| Boiling point/boiling range | <i>Not applicable.</i> |
| Melting point | <i>Not applicable.</i> |
| Flammability (solid, gas) | Not applicable. |
| Explosive properties | Not classified |
| Oxidising properties | Not classified |
| Flash point | ≥ -55 °C [<i>Test Method:</i> Closed Cup] |
| Autoignition temperature | <i>No data available.</i> |
| Flammable Limits(LEL) | <i>No data available.</i> |
| Flammable Limits(UEL) | <i>No data available.</i> |
| Vapour pressure | <i>No data available.</i> |
| Relative density | 0.71 [<i>Ref Std:</i> WATER=1] |
| Water solubility | <i>No data available.</i> |
| | |
| Partition coefficient: n-octanol/water | <i>No data available.</i> |
| Evaporation rate | <i>No data available.</i> |
| Vapour density | <i>No data available.</i> |
| | |
| Viscosity | <i>Not applicable.</i> |
| Density | 0.71 g/ml |

9.2. Other information

| | |
|------------------------------------------------------|---------------------------|
| Volatile organic compounds (VOC) | 636 g/l |
| Percent volatile | 89.6 % weight |
| VOC less H₂O & exempt solvents | <i>No data available.</i> |

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 oxidising agents.

10.6 Hazardous decomposition products

Substance

Condition

None known.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Skin contact

Dermal Defatting: Signs/symptoms may include localised redness, itching, drying and cracking of skin.

Inhalation

Intentional concentration and inhalation may be harmful or fatal. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause target organ effects after inhalation.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause target organ effects after ingestion.

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.

Single exposure, above recommended guidelines, may cause:

Cardiac sensitisation: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Toxicological Data

Acute Toxicity

| Name | Route | Species | Value |
|----------------|--------------------------|---------|------------------|
| Dimethyl Ether | Inhalation-Gas (4 hours) | Rat | LC50 164,000 ppm |

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

| | | | |
|-----------------|----------------------------|--------|---------------------|
| Pentane | Dermal | Rabbit | LD50 3,000 mg/kg |
| Pentane | Inhalation-Vapor (4 hours) | Rat | LC50 > 18 mg/l |
| Pentane | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Acetone | Dermal | Rabbit | LD50 > 15,688 mg/kg |
| Acetone | Inhalation-Vapor (4 hours) | Rat | LC50 76 mg/l |
| Acetone | Ingestion | Rat | LD50 5,800 mg/kg |
| 2-methyl butane | Dermal | Rabbit | LD50 3,000 mg/kg |
| 2-methyl butane | Inhalation-Vapor (4 hours) | Rat | LC50 > 18 mg/l |
| 2-methyl butane | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Cyclohexane | Dermal | Rat | LD50 > 2,000 mg/kg |
| Cyclohexane | Inhalation-Vapor (4 hours) | Rat | LC50 13.9 mg/l |
| Cyclohexane | Ingestion | Rat | LD50 6,200 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|-----------------|---------|--------------------|
| Dimethyl Ether | | No data available |
| Pentane | | Minimal irritation |
| Acetone | | Minimal irritation |
| 2-methyl butane | | Minimal irritation |
| Cyclohexane | | Mild irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|-----------------|---------|-------------------|
| Dimethyl Ether | | No data available |
| Pentane | | Mild irritant |
| Acetone | | Severe irritant |
| 2-methyl butane | | Mild irritant |
| Cyclohexane | | Mild irritant |

Skin Sensitisation

| Name | Species | Value |
|-----------------|---------|-------------------|
| Dimethyl Ether | | No data available |
| Pentane | | Not sensitizing |
| Acetone | | No data available |
| 2-methyl butane | | Not sensitizing |
| Cyclohexane | | No data available |

| | | |
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Respiratory Sensitisation

| Name | Species | Value |
|-----------------|---------|-------------------|
| Dimethyl Ether | | No data available |
| Pentane | | No data available |
| Acetone | | No data available |
| 2-methyl butane | | No data available |
| Cyclohexane | | No data available |

Germ Cell Mutagenicity

| Name | Route | Value |
|------|-------|-------|
| | | |

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

| | | |
|-----------------|------------|------------------------------------------------------------------------------|
| Dimethyl Ether | In Vitro | Not mutagenic |
| Dimethyl Ether | Inhalation | Not mutagenic |
| Pentane | Inhalation | Not mutagenic |
| Pentane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Acetone | In vivo | Some positive data exist, but the data are not sufficient for classification |
| 2-methyl butane | Inhalation | Not mutagenic |
| 2-methyl butane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Cyclohexane | In Vitro | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|-----------------|----------------|---------|-------------------|
| Dimethyl Ether | Inhalation | | Not carcinogenic |
| Pentane | | | No data available |
| Acetone | Not specified. | | Not carcinogenic |
| 2-methyl butane | | | No data available |
| Cyclohexane | | | No data available |

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

| Name | Route | Value | Species | Test result | Exposure Duration |
|-----------------|------------|---------------------------------------------------------------------------------------------------------|---------|-----------------------------|-------------------|
| Dimethyl Ether | Inhalation | Some positive reproductive/developmental data exist, but the data are not sufficient for classification | | LOEL 20,000 ppm | |
| Pentane | Ingestion | Not toxic to reproduction and/or development | | NOAEL 1,000 mg/kg/day | |
| Pentane | Inhalation | Not toxic to reproduction and/or development | | NOAEL 30 mg/l | |
| Acetone | Ingestion | Some positive reproductive/developmental data exist, but the data are not sufficient for classification | | NOEL 1,700 mg/kg/day | |
| Acetone | Inhalation | Some positive reproductive/developmental data exist, but the data are not sufficient for classification | | NOEL 5.2 mg/l | |
| 2-methyl butane | Ingestion | Not toxic to reproduction and/or development | | NOAEL 1,000 mg/kg/day | |
| 2-methyl butane | Inhalation | Not toxic to reproduction and/or development | | NOAEL 30 mg/l | |
| Cyclohexane | Inhalation | Some positive reproductive/developmental data exist, but the data are not sufficient for classification | | NOEL 6.9 mg/l | |

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

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Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|-----------------|------------|--------------------------------------|------------------------------------------------------------------------------|---------|---------------------|-------------------|
| Dimethyl Ether | Inhalation | cardiac sensitization | May cause damage to organs | | NOAEL 100,000 ppm | |
| Dimethyl Ether | Inhalation | central nervous system depression | May cause drowsiness or dizziness | | LOAEL 10,000 ppm | |
| Pentane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | | NOAEL N/A | |
| Pentane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | Irritation Positive | |
| Pentane | Inhalation | cardiac sensitization | Some positive data exist, but the data are not sufficient for classification | | LOEL 295 mg/l | |
| Acetone | Inhalation | central nervous system depression | May cause drowsiness or dizziness | | LOAEL 0.6 mg/l | |
| Acetone | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | Irritation Positive | |
| Acetone | Inhalation | liver | Some positive data exist, but the data are not sufficient for classification | | LOEL 24 mg/l | |
| Acetone | Inhalation | hematopoietic system immune system | Some positive data exist, but the data are not sufficient for classification | | NOEL 0.6 mg/l | |
| Acetone | Ingestion | central nervous system depression | May cause drowsiness or dizziness | | NOAEL N/A | |
| 2-methyl butane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | | NOAEL N/A | |
| 2-methyl butane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | Irritation N/A | |

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

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|-----------------|------------|-----------------------------------|------------------------------------------------------------------------------|--|---------------------|--|
| 2-methyl butane | Inhalation | cardiac sensitization | Some positive data exist, but the data are not sufficient for classification | | LOEL 295 mg/l | |
| Cyclohexane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | | LOAEL 0.09 mg/l | |
| Cyclohexane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | Irritation Positive | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|----------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------|--------------------|-------------------|
| Dimethyl Ether | Inhalation | liver | Some positive data exist, but the data are not sufficient for classification | | NOEL 2,000 ppm | |
| Dimethyl Ether | Inhalation | hematopoietic system | Some positive data exist, but the data are not sufficient for classification | | NOEL 10,000 ppm | |
| Dimethyl Ether | Inhalation | bone marrow | All data are negative | | NOAEL 25,000 ppm | |
| Pentane | Inhalation | peripheral nervous system | Some positive data exist, but the data are not sufficient for classification | | NOAEL N/A | |
| Pentane | Inhalation | heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system | All data are negative | | NOAEL 20 mg/l | |
| Pentane | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | | LOEL 250 mg/kg/day | |
| Acetone | Dermal | eyes | Some positive data exist, but the data are not sufficient for classification | | NOEL N/A | |
| Acetone | Inhalation | kidney and/or bladder | Some positive data exist, but the data are not | | LOAEL 119 mg/l | |

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

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| | | | sufficient for classification | | | |
| Acetone | Inhalation | hematopoietic system immune system | Some positive data exist, but the data are not sufficient for classification | | NOEL 0.6 mg/l | |
| Acetone | Inhalation | liver | All data are negative | | NOAEL 45 mg/l | |
| Acetone | Inhalation | heart | All data are negative | | NOAEL 19,000 ppm | |
| Acetone | Ingestion | respiratory system | Some positive data exist, but the data are not sufficient for classification | | NOEL N/A | |
| Acetone | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | | NOEL 900 mg/kg/day | |
| Acetone | Ingestion | heart | Some positive data exist, but the data are not sufficient for classification | | LOEL 2,500 mg/kg/day | |
| Acetone | Ingestion | hematopoietic system | Some positive data exist, but the data are not sufficient for classification | | NOEL 200 mg/kg/day | |
| Acetone | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | | NOEL 1,579 mg/kg/day | |
| Acetone | Ingestion | muscles | All data are negative | | NOAEL 2,500 mg/kg | |
| Acetone | Ingestion | skin eyes | All data are negative | | NOAEL 11,298 mg/kg/day | |
| Acetone | Ingestion | bone, teeth, nails, and/or hair | All data are negative | | NOAEL 11,298 mg/kg | |
| 2-methyl butane | Inhalation | peripheral nervous system | Some positive data exist, but the data are not sufficient for classification | | NOAEL N/A | |
| 2-methyl butane | Inhalation | heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory | All data are negative | | NOAEL 20 mg/l | |

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

| | | | | | | |
|-----------------|------------|------------------------------|------------------------------------------------------------------------------|--|--------------------|--|
| | | system | | | | |
| 2-methyl butane | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | | LOEL 250 mg/kg/day | |
| Cyclohexane | Inhalation | hematopoietic system liver | Some positive data exist, but the data are not sufficient for classification | | NOEL 6.9 mg/l | |
| Cyclohexane | Inhalation | auditory system | Some positive data exist, but the data are not sufficient for classification | | NOEL 1.7 mg/l | |
| Cyclohexane | Inhalation | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | | NOEL 1.5 mg/l | |
| Cyclohexane | Inhalation | peripheral nervous system | All data are negative | | NOAEL 8.6 mg/l | |

Aspiration Hazard

| Name | Value |
|-----------------|--------------------------|
| Dimethyl Ether | Not an aspiration hazard |
| Pentane | Aspiration hazard |
| Acetone | Not an aspiration hazard |
| 2-methyl butane | Aspiration hazard |
| Cyclohexane | 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.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity**Acute aquatic hazard:**

GHS Acute 2: Toxic to aquatic life with long lasting effects.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No component test data available.

| Material | Organism | Type | Exposure | Test endpoint | Test result |
|--------------------------------------------------|----------|--------------------------|----------|---------------|-------------|
| 3M(TM) Spray Adhesive 90 Methylene Chloride Free | | Insufficient to classify | | | % weight |

3M(TM) Spray Adhesive 90 Methylene Chloride Free (PL4441)

(PL4441)

12.2. Persistence and degradability

No test data available.

12.3 : Bioaccumulative potential

No test data available.

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. 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

EU waste code (product container after use)

- 15 01 04 Metallic packaging

SECTION 14: Transportation information

YP-2080-6128-0

ADR/RID: UN1950, AEROSOLS, LIMITED QUANTITY, 2.1, (D), ADR Classification Code: 5F.

IMDG-CODE: UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, EMS: FD,SU.

ICAO/IATA: UN1950, AEROSOLS, FLAMMABLE, 2.1.

SECTION 15: Regulatory information

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

Global inventory status

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

| | |
|--------|-------------------------------------------------------|
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| H220 | Extremely flammable gas. |
| H224 | Extremely flammable liquid and vapour. |
| H225 | Highly flammable liquid and vapour. |
| 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. |

List of relevant R-phrases

| | |
|--------|--------------------------------------------------------------------------------------------------|
| R11 | Highly flammable. |
| R12 | Extremely flammable. |
| R36 | Irritating to eyes. |
| R38 | Irritating to skin. |
| R50/53 | Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. |
| R51/53 | Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. |
| R65 | Harmful: May cause lung damage if swallowed. |
| R66 | Repeated exposure may cause skin dryness or cracking. |
| R67 | Vapours may cause drowsiness and dizziness. |

Revision information:

Revision Changes:

Risk phrase was modified.

Safety phrase was modified.

Section 8: Respiratory protection - recommended respirators was modified.

Section 3: Composition/ Information of ingredients table was modified.

Section 2: Indication of danger information was modified.

Section 9: Flammability (solid, gas) information was modified.

Section 9: Density information was modified.

Section 8: OEL table agency column heading was modified.

OEL Ceiling Heading was modified.

OEL Reg Agency Desc was modified.

Section 8: STEL key was modified.

Section 8: ppm key was modified.

Section 11: Acute Toxicity table was modified.

Section 5: Fire - Extinguishing media information was modified.

Section 6: Accidental release personal information was modified.

Section 6: Accidental release clean-up information was modified.

Section 7: Conditions safe storage was modified.

Section 13: Standard Phrase Category Waste GHS was modified.

Section 8: Respiratory protection - recommended respirators guide was added.

Section 8: Occupational exposure limit table was added.

Lactation Table was added.

Photosensitisation Table was added.

Section 11: Lactation table - Species heading was added.

Section 11: Photosensitisation table - Value heading was added.

Label: Graphic Text was added.

Label: Graphic Text was added.

Label: Graphic Text was added.

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Label: Graphic Text was added.

Label: Graphic Text was added.

Section 2: R phrase reference was added.

Label: Graphic was added.

Label: Graphic was added.

Label: Graphic Text was added.

Section 9: Flammability (solid, gas) information was added.

Section 2: Symbol was deleted.

Section 2: Symbols heading was deleted.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

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