Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the South African National Standard SANS 10234:2008.

SECTION 1: Identification

1.1. Product identifier
3M Scotch-Weld Spray 75 Repositonable Adhesive

Product Identification Numbers
YP-2080-6111-6

1.2. Recommended use and restrictions on use

Recommended use
Adhesive aerosol., Mounting of stencils and bonding of paper, card, fabric and other graphic art materials.

1.3. Supplier's details

Address:	3M South Africa (Pty) Ltd, Private Bag X926, Rivonia 2128
Telephone:	011 806 2000
E Mail:	Not available.
Website:	www.3m.co.za

1.4. Emergency telephone number
011 806 2000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Flammable Aerosol: Category 1.
Serious Eye Damage/Irritation: Category 2A
Skin Corrosion/Irritation: Category 2.
Reproductive Toxicity: Category 2.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Acute Aquatic Toxicity: Category 3.

2.2. Label elements
Signal word
DANGER!

Symbols
Flame |Exclamation mark | Health Hazard |

Pictograms

HAZARD STATEMENTS:

H222	Extremely flammable aerosol.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs: cardiovascular system
H402	Harmful to aquatic life.

PRECAUTIONARY STATEMENTS

General:

P102	Keep out of reach of children.

Prevention:

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280E	Wear protective gloves.

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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.

Storage:

P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.
P405	Store locked up.

Disposal:

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt

Acetone	67-64-1	25 - 35
Butane	106-97-8	10 - 20
Propane	74-98-6	10 - 20
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane	931-254-9	7 - 13
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	7 - 13
Isobutane	75-28-5	5 - 10
Acrylic Resin	Trade Secret	5 - 10
Pentane	109-66-0	1 - 5
Non Volatile Compound	Trade Secret	1 - 5
2-methyl butane	78-78-4	0.5 - 1.5
n-hexane	110-54-3	0 - 1
Cyclohexane	110-82-7	0 - 0.5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. Get medical attention.

Skin contact
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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. Suitable 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	Condition
Hydrocarbons.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions 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. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. WARNING ! A motor could be an ignition source and could cause flammable gases or vapors 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. 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 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. 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 release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

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 50C/122F. Protect from sunlight. Store in a well-ventilated place. Store away from heat. Store away from acids. Store away from oxidising agents.

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
Natural gas	106-97-8	ACGIH	Limit value not established:	
Butane	106-97-8	ACGIH	STEL:1000 ppm	

Butane	106-97-8	South Africa RELs	TWA(8 hours):1430 mg/m3(600 ppm);STEL(15 minutes):1780 mg/m3(750 ppm)	
Pentane	109-66-0	ACGIH	TWA:1000 ppm	
Pentane, all isomers	109-66-0	South Africa RELs	TWA(8 hours):1800 mg/m3(600 ppm);STEL(15 minutes):2250 mg/m3(750 ppm)	
n-hexane	110-54-3	South Africa RELs	TWA(8 hours):70 mg/m3(20 ppm)	
n-hexane	110-54-3	ACGIH	TWA:50 ppm	SKIN
Cyclohexane	110-82-7	ACGIH	TWA:100 ppm	
Cyclohexane	110-82-7	South Africa RELs	TWA(8 hours):340 mg/m3(100 ppm);STEL(15 minutes):1030 mg/m3(300 ppm)	
Acetone	67-64-1	ACGIH	TWA:250 ppm;STEL:500 ppm	A4: Not class. as human carcin
Acetone	67-64-1	South Africa RELs	TWA(8 hours):1780 mg/m3(750 ppm);STEL(15 minutes):3560 mg/m3(1500 ppm)	
Propane	74-98-6	ACGIH	Limit value not established:	
Natural gas	75-28-5	ACGIH	Limit value not established:	
Isobutane	75-28-5	ACGIH	STEL:1000 ppm	
Pentane, all isomers	78-78-4	South Africa RELs	TWA(8 hours):1800 mg/m3(600 ppm);STEL(15 minutes):2250 mg/m3(750 ppm)	
2-methyl butane	78-78-4	ACGIH	TWA:1000 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
South Africa CLs : South Africa. Control Limits. Regulations for Hazardous Chemical Substances, Table 1
South Africa RELs : South Africa. Recommended Exposure Limits (RELs) Regulations for Hazardous Chemical Substances, Table 2
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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

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.

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. Wear protective gloves. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

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 and particulates
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	Sweet odour; clear
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	*No data available.*
Flash point	-46 ºC
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
Vapour density	*No data available.*
Density	0.71 g/ml
Relative density	0.71 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*Not applicable.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*Not applicable.*
Volatile organic compounds (VOC)	636 g/l [*Details:*EU Definition]
Percent volatile	90 % weight
VOC less H2O & exempt solvents	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

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
None known.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

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:

Inhalation
Intentional concentration and inhalation may be harmful or fatal. 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
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired 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.
Single exposure, above recommended guidelines, may cause:

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

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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 ATE2 000 - 5 000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE2 000 - 5 000 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
Propane	Inhalation-Gas (4 hours)	Rat	LC50 > 200 000 ppm
Butane	Inhalation-Gas (4 hours)	Rat	LC50 277 000 ppm
Isobutane	Inhalation-Gas (4 hours)	Rat	LC50 276 000 ppm
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation-Vapor (4 hours)	Not available	LC50 > 20 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Dermal	Rabbit	LD50 > 2 000 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	Rat	LD50 > 5 000 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Dermal		LD50 > 5 000 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 20 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Ingestion	Rat	LD50 > 5 000 mg/kg
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
Acrylic Resin	Dermal		LD50 estimated to be > 5 000 mg/kg
Acrylic Resin	Ingestion		LD50 estimated to be 2 000 - 5 000 mg/kg
Non Volatile Compound	Dermal		LD50 estimated to be > 5 000 mg/kg
Non Volatile Compound	Ingestion	Rat	LD50 > 34 000 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
n-hexane	Dermal	Rabbit	LD50 > 2 000 mg/kg
n-hexane	Inhalation-Vapor (4 hours)	Rat	LC50 170 mg/l
n-hexane	Ingestion	Rat	LD50 > 28 700 mg/kg
Cyclohexane	Dermal	Rat	LD50 > 2 000 mg/kg
Cyclohexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 32.9 mg/l
Cyclohexane	Ingestion	Rat	LD50 6 200 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acetone	Mouse	Minimal irritation
Propane	Rabbit	Minimal irritation
Butane	Professional judgement	No significant irritation
Isobutane	Professional judgement	No significant irritation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Professional judgement	Irritant
Pentane	Rabbit	Minimal irritation
Acrylic Resin	Professional judgement	No significant irritation
2-methyl butane	Rabbit	Minimal irritation
n-hexane	Human and animal	Mild irritant
Cyclohexane	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Acetone	Rabbit	Severe irritant
Propane	Rabbit	Mild irritant
Butane	Rabbit	No significant irritation
Isobutane	Professional judgement	No significant irritation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Professional judgement	No significant irritation
Pentane	Rabbit	Mild irritant
2-methyl butane	Rabbit	Mild irritant
n-hexane	Rabbit	Mild irritant
Cyclohexane	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not available	Not sensitizing
Pentane	Guinea pig	Not sensitizing
Acrylic Resin	Professional judgement	Not sensitizing
2-methyl butane	Guinea pig	Not sensitizing
n-hexane	Human	Not sensitizing

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Acetone	In vivo	Not mutagenic
Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Propane	In Vitro	Not mutagenic
Butane	In Vitro	Not mutagenic
Isobutane	In Vitro	Not mutagenic
Pentane	In vivo	Not mutagenic
Pentane	In Vitro	Some positive data exist, but the data are not sufficient for classification
2-methyl butane	In vivo	Not mutagenic
2-methyl butane	In Vitro	Some positive data exist, but the data are not sufficient for classification
n-hexane	In Vitro	Not mutagenic
n-hexane	In vivo	Not mutagenic
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Acetone	Not specified.	Multiple animal species	Not carcinogenic
n-hexane	Dermal	Mouse	Not carcinogenic
n-hexane	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Acetone	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1 700 mg/kg/day	13 weeks
Acetone	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 5.2 mg/l	during organogenesis
Pentane	Ingestion	Not toxic to development	Rat	NOAEL 1 000 mg/kg/day	during organogenesis
Pentane	Inhalation	Not toxic to development	Rat	NOAEL 30 mg/l	during organogenesis
2-methyl butane	Ingestion	Not toxic to development	Rat	NOAEL 1 000 mg/kg/day	during organogenesis
2-methyl butane	Inhalation	Not toxic to development	Rat	NOAEL 30 mg/l	during organogenesis
n-hexane	Ingestion	Not toxic to development	Mouse	NOAEL 2 200 mg/kg/day	during organogenesis
n-hexane	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.7 mg/l	during gestation
n-hexane	Ingestion	Toxic to male reproduction	Rat	NOAEL 1 140 mg/kg/day	90 days
n-hexane	Inhalation	Toxic to male reproduction	Rat	LOAEL 3.52 mg/l	28 days
Cyclohexane	Inhalation	Not toxic to female reproduction	Rat	NOAEL 24	2 generation

				mg/l	
Cyclohexane	Inhalation	Not toxic to male reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 6.9 mg/l	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Acetone	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL Not available	
Acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Propane	Inhalation	cardiac sensitization	Causes damage to organs	Human	NOAEL Not available	
Propane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Propane	Inhalation	respiratory irritation	All data are negative	Human	NOAEL Not available	
Butane	Inhalation	cardiac sensitization	Causes damage to organs	Human	NOAEL Not available	
Butane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Butane	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 5 000 ppm	25 minutes
Butane	Inhalation	respiratory irritation	All data are negative	Rabbit	NOAEL Not available	
Isobutane	Inhalation	cardiac sensitization	Causes damage to organs	Multiple animal species	NOAEL Not available	
Isobutane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Isobutane	Inhalation	respiratory irritation	All data are negative	Mouse	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Pentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
Pentane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
Pentane	Inhalation	cardiac sensitization	Some positive data exist, but the	Dog	NOAEL Not	not available

			data are not sufficient for classification		available	
Pentane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	not available
2-methyl butane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
2-methyl butane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
2-methyl butane	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL Not available	not available
2-methyl butane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	not available
n-hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
n-hexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL Not available	8 hours
n-hexane	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 24.6 mg/l	8 hours
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
Acetone	Dermal	eyes	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL Not available	3 weeks
Acetone	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart | liver	All data are negative	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2 500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 3 896 mg/kg/day	14 days

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Acetone	Ingestion	eyes	All data are negative	Rat	NOAEL 3 400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	All data are negative	Rat	NOAEL 2 500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	All data are negative	Rat	NOAEL 2 500 mg/kg	13 weeks
Acetone	Ingestion	skin | bone, teeth, nails, and/or hair	All data are negative	Mouse	NOAEL 11 298 mg/kg/day	13 weeks
Butane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4 489 ppm	90 days
Butane	Inhalation	blood	All data are negative	Rat	NOAEL 4 489 ppm	90 days
Isobutane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4 500 ppm	13 weeks
Pentane	Inhalation	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
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	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Ingestion	kidney and/or bladder	All data are negative	Rat	NOAEL 2 000 mg/kg/day	28 days
2-methyl butane	Inhalation	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
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 system	All data are negative	Rat	NOAEL 20 mg/l	13 weeks
2-methyl butane	Ingestion	kidney and/or bladder	All data are negative	Rat	NOAEL 2 000 mg/kg/day	28 days
n-hexane	Inhalation	peripheral nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
n-hexane	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 1.76 mg/l	13 weeks
n-hexane	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 months
n-hexane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1.76 mg/l	6 months
n-hexane	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for	Mouse	NOAEL 35.2 mg/l	13 weeks

			classification			
n-hexane	Inhalation	auditory system | immune system | eyes	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
n-hexane	Inhalation	heart | skin | endocrine system	All data are negative	Rat	NOAEL 1.76 mg/l	6 months
n-hexane	Ingestion	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1 140 mg/kg/day	90 days
n-hexane	Ingestion	endocrine system | hematopoietic system | liver | immune system | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	13 weeks
Cyclohexane	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 2.7 mg/l	10 weeks
Cyclohexane	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous system	All data are negative	Rat	NOAEL 8.6 mg/l	30 weeks

Aspiration Hazard

Name	Value
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Aspiration hazard
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Aspiration hazard
Pentane	Aspiration hazard
2-methyl butane	Aspiration hazard
n-hexane	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 3: Harmful to aquatic life.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result

Acrylic Resin	Trade Secret		Data not available or insufficient for classification			
Isobutane	75-28-5		Data not available or insufficient for classification			
Pentane	109-66-0	Green Algae	Experimental	72 hours	NOEC	2.04 mg/l
Pentane	109-66-0	Green Algae	Experimental	72 hours	EC50	7.51 mg/l
Pentane	109-66-0	Water flea	Experimental	48 hours	EC50	2.7 mg/l
Pentane	109-66-0	Rainbow trout	Experimental	96 hours	LC50	4.26 mg/l
Butane	106-97-8		Data not available or insufficient for classification			
2-methyl butane	78-78-4		Data not available or insufficient for classification			
Propane	74-98-6		Data not available or insufficient for classification			
Non Volatile Compound	Trade Secret		Data not available or insufficient for classification			
Acetone	67-64-1	Water flea	Experimental	21 days	NOEC	1 000 mg/l
Acetone	67-64-1	Algae other	Experimental	96 hours	EC50	11 493 mg/l
Acetone	67-64-1	Rainbow trout	Experimental	96 hours	LC50	5 540 mg/l
Acetone	67-64-1	Water flea	Experimental	48 hours	EC50	13 500 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4		Data not available or insufficient for classification			
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane	931-254-9		Data not available or insufficient for classification			
n-hexane	110-54-3	Water flea	Experimental	48 hours	EC50	>3.9 mg/l
n-hexane	110-54-3	Fathead minnow	Experimental	96 hours	LC50	2.5 mg/l
Cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
Cyclohexane	110-82-7	Fathead minnow	Experimental	96 hours	LC50	4.53 mg/l
Cyclohexane	110-82-7	Green Algae	Experimental	72 hours	EC50	3.4 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Pentane	109-66-0	Experimental Biodegradation	28 days	BOD	96 % weight	OECD 301C - MITI test (I)
2-methyl	78-78-4	Experimental	20 days	Percent	100 % weight	Other methods

butane		Biodegradation		degraded		
Cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 % weight	OECD 301F - Manometric respirometry
Non Volatile Compound	Trade Secret	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Acetone	67-64-1	Experimental Biodegradation	28 days	BOD	78 % weight	OECD 301D - Closed bottle test
n-hexane	110-54-3	Experimental Bioconcentration	28 days	BOD	100 % weight	OECD 301C - MITI test (I)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Acrylic Resin	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane	931-254-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Pentane	109-66-0	Experimental Photolysis		Photolytic half-life (in air)	8.07 days (t 1/2)	Other methods
n-hexane	110-54-3	Experimental Photolysis		Photolytic half-life (in air)	5.4 days (t 1/2)	Other methods
Butane	106-97-8	Experimental Photolysis		Photolytic half-life (in air)	12.3 days (t 1/2)	Other methods
Isobutane	75-28-5	Experimental Photolysis		Photolytic half-life (in air)	13.4 days (t 1/2)	Other methods
2-methyl butane	78-78-4	Experimental Photolysis		Photolytic half-life (in air)	8.11 days (t 1/2)	Other methods
Propane	74-98-6	Experimental Photolysis		Photolytic half-life (in air)	27.5 days (t 1/2)	Other methods
Cyclohexane	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.14 days (t 1/2)	Other methods
Acetone	67-64-1	Experimental Photolysis		Photolytic half-life (in air)	147 days (t 1/2)	Other methods
Acetone	67-64-1	Estimated Photolysis		Photolytic half-life (in air)	80 days (t 1/2)	Other methods

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propane	74-98-6	Experimental Bioconcentration		Log Kow	2.36	Other methods
Isobutane	75-28-5	Experimental Bioconcentration		Log Kow	2.76	Other methods
Butane	106-97-8	Experimental Bioconcentration		Log Kow	2.89	Other methods

Acetone	67-64-1	Experimental BCF - Other		Bioaccumulation factor	0.65	Other methods
n-hexane	110-54-3	Modeled Bioconcentration		Bioaccumulation factor	138	Other methods
Cyclohexane	110-82-7	Experimental BCF-Carp	56 days	Bioaccumulation factor	<129	Other methods
Pentane	109-66-0	Estimated Bioconcentration		Bioaccumulation factor	26	Estimated: Bioconcentration factor
2-methyl butane	78-78-4	Estimated Bioconcentration		Bioaccumulation factor	65	Estimated: Bioconcentration factor
Non Volatile Compound	Trade Secret	Estimated BCF-Carp	70 days	Bioaccumulation factor	11100	Other methods
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Acrylic Resin	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane	931-254-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects

Material	CAS Nbr	Ozone Depletion Potential	Global Warming Potential
acetone	67-64-1	0	

SECTION 13: Disposal considerations

13.1. Disposal methods
Product must only be disposed of by an authorized/permitted waste disposal contractor or incinerated in an industrial or commercial facility in the presence of a combustible material.

SECTION 14: Transport Information

Compliance is required to South African Transport Information Road Traffic Act & Regulations and Railroad regulations, IATA Standards for airfreight and Maritime standards for ocean freight.

SECTION 15: Regulatory information

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

Global inventory status
Contact 3M for more information.

SECTION 16: Other information

Revision information:

Section 9: Relative density information information was modified.
Section 12: Persistence and Degradability information information was modified.

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.

3M South Africa SDSs are available at www.3m.co.za