



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006) as amended by Regulation (EU) 2020/878

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

1.1. Product identifier

Stamark pavement preparation P50

Product Identification Numbers

FS-9100-1623-7

7000146237

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

Identified uses

Pavement surface preparation for stamark products

1.3. Details of the supplier of the safety data sheet

Address: 3M Ireland Limited, 70 SIR JOHN ROGERSON'S QUAY, D02R296 DUBLIN 2
Telephone: +353 1 280 3555
E Mail: ner-productstewardship@mmm.com
Website: www.3M.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

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.

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225

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
 Aspiration Hazard, Category 1 - Asp. Tox. 1; H304
 Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

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) |GHS08 (Health Hazard) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
ethyl acetate	141-78-6	205-500-4	15 - 40
butanone	78-93-3	201-159-0	15 - 40
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		927-510-4	7 - 13

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H304	May be fatal if swallowed and enters airways.
H412	Harmful 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.
P261E	Avoid breathing vapour or spray.
P280B	Wear protective gloves and eye/face protection.

Response:

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.

10% of the mixture consists of components of unknown acute oral toxicity.

Contains 10% of components with unknown hazards to the aquatic environment.

Nota L applied.

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]
butanone	(CAS-No.) 78-93-3 (EC-No.) 201-159-0 (REACH-No.) 01-2119457290-43	15 - 40	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
ethyl acetate	(CAS-No.) 141-78-6 (EC-No.) 205-500-4 (REACH-No.) 01-2119475103-46	15 - 40	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	(EC-No.) 927-510-4 (REACH-No.) 01-2119475515-33	7 - 13	Aquatic Chronic 2, H411 Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336
DISTILLATES (PETROLEUM), C3-6, PIPERYLENE-RICH, POLYMERS WITH ISOBUTYLENE	(CAS-No.) 152698-66-3	< 10	Substance not classified as hazardous
Polymer	Trade Secret	< 10	Substance not classified as hazardous
Styrene-isoprene copolymer	(CAS-No.) 25038-32-8	< 10	Substance not classified as hazardous
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	(CAS-No.) 70750-57-1 (EC-No.) 500-245-8	0.5 - 1.5	Aquatic Chronic 4, H413
Distillates (petroleum), hydrotreated light naphthenic	(CAS-No.) 64742-53-6 (EC-No.) 265-156-6	0.5 - 1.5	Nota L Acute Tox. 4, H332 Asp. Tox. 1, H304

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

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

Do not induce vomiting. Get immediate medical attention.

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

The most important symptoms and effects based on the CLP classification include:

Irritation to the skin (localized redness, swelling, itching, and dryness). Dermal defatting (localized redness, itching, drying and cracking of skin). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision). Aspiration pneumonitis (coughing, gasping, choking, burning of the mouth, and difficulty breathing). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

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

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.
Methane	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Ketones.	During combustion.
Toxic vapour, gas, particulate.	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. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

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

Contain spill. 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 handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing 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.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators...) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. 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
ethyl acetate	141-78-6	Ireland OELs	TWA(8 hours):734 mg/m ³ (200 ppm);STEL(15 minutes):1468 mg/m ³ (400 ppm)	
butanone	78-93-3	Ireland OELs	TWA(8 hours):600 mg/m ³ (200 ppm);STEL(15 minutes):900 mg/m ³ (300 ppm)	SKIN

Ireland OELs : Ireland. OELs
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
butanone		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	1,161 mg/kg bw/d
butanone		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	600 mg/m ³
ethyl acetate		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	63 mg/kg bw/d
ethyl acetate		Worker	Inhalation, Long-term exposure (8 hours), Local effects	734 mg/m ³
ethyl acetate		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	734 mg/m ³
ethyl acetate		Worker	Inhalation, Short-term exposure, Local effects	1,468 mg/m ³
ethyl acetate		Worker	Inhalation, Short-term exposure, Systemic effects	1,468 mg/m ³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
butanone		Agricultural soil	22.5 mg/kg d.w.
butanone		Freshwater	55.8 mg/l
butanone		Freshwater sediments	284.7 mg/kg d.w.
butanone		Intermittent releases to water	55.8 mg/l
butanone		Marine Water	55.8 mg/l
butanone		Marine water sediments	284.7 mg/kg d.w.
butanone		Sewage Treatment Plant	709 mg/l
ethyl acetate		Agricultural soil	0.148 mg/kg d.w.
ethyl acetate		Concentration in freshwater fish for secondary poisoning	0.2 mg/kg w.w.
ethyl acetate		Freshwater	0.24 mg/l

ethyl acetate		Freshwater sediments	1.15 mg/kg d.w.
ethyl acetate		Intermittent releases to water	1.65 mg/l
ethyl acetate		Marine Water	0.024 mg/l
ethyl acetate		Marine water sediments	0.115 mg/kg d.w.
ethyl acetate		Sewage Treatment Plant	650 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

Provide ventilated enclosure for heat curing. 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. Use explosion-proof ventilation 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:

Safety glasses with side shields.

Indirect vented goggles.

Applicable Norms/Standards

Use eye protection conforming to EN 16321

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

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

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	>.3	=>8 hours

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

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

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: filter type A

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:	Viscous.
Colour	Pale Yellow
Odor	Solvent
Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>No data available.</i>
Boiling point/boiling range	70 - 77 °C [<i>Details:ethyl acetate</i>]
Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Flash point	-4 °C [<i>Test Method:Closed Cup</i>] [<i>Details:ethyl acetate</i>]
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
pH	<i>substance/mixture is non-soluble (in water)</i>
Kinematic Viscosity	17.6 - 72.3 mm ² /sec
Water solubility	Nil
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	0.83 - 0.85 g/cm ³ [<i>@ 20 °C</i>]
Relative density	<i>No data available.</i>
Relative Vapour Density	<i>No data available.</i>
Particle Characteristics	<i>Not applicable.</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	18 - 22 % [<i>@ 71 °C</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

Explosive when mixed with oxidizing substances.
Strong oxidising agents.

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

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 localised 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

Chemical (aspiration) pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish coloured skin (cyanosis), and may be fatal. 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	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
butanone	Dermal	Rabbit	LD50 > 8,050 mg/kg
butanone	Inhalation-Vapour (4 hours)	Rat	LC50 34.5 mg/l
butanone	Ingestion	Rat	LD50 2,737 mg/kg
ethyl acetate	Dermal	Rabbit	LD50 > 18,000 mg/kg
ethyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 70.5 mg/l
ethyl acetate	Ingestion	Rat	LD50 5,620 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Dermal	Rabbit	LD50 > 2,920 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Dermal	Rat	LD50 > 2,000 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation-Vapour (4 hours)	Rat	LC50 > 23.3 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation-Vapour (4 hours)	Rat	LC50 > 5.61 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	Rat	LD50 > 5,840 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	Rat	LD50 > 5,000 mg/kg
Polymer	Ingestion	Rat	LD50 > 2,000 mg/kg
Polymer	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
Styrene-isoprene copolymer	Dermal	Not available	LD50 > 2,000 mg/kg
Styrene-isoprene copolymer	Ingestion	Not available	LD50 > 2,000 mg/kg
Distillates (petroleum), hydrotreated light naphthenic	Dermal	Rabbit	LD50 > 2,000 mg/kg
Distillates (petroleum), hydrotreated light naphthenic	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2.2 mg/l
Distillates (petroleum), hydrotreated light naphthenic	Ingestion	Rat	LD50 > 5,000 mg/kg
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	Dermal	Rat	LD50 > 2,000 mg/kg
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
butanone	Rabbit	Minimal irritation
ethyl acetate	Rabbit	Minimal irritation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Rabbit	Irritant
Polymer	In vitro data	No significant irritation
Styrene-isoprene copolymer	Professional judgement	No significant irritation
Distillates (petroleum), hydrotreated light naphthenic	Rabbit	Mild irritant
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	In vitro data	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value

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butanone	Rabbit	Severe irritant
ethyl acetate	Rabbit	Mild irritant
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Rabbit	No significant irritation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Rabbit	Mild irritant
Polymer	In vitro data	No significant irritation
Styrene-isoprene copolymer	Professional judgement	No significant irritation
Distillates (petroleum), hydrotreated light naphthenic	Rabbit	Mild irritant
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
ethyl acetate	Guinea pig	Not classified
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Guinea pig	Not classified
Polymer	Mouse	Not classified
Styrene-isoprene copolymer		Not classified
Distillates (petroleum), hydrotreated light naphthenic	Guinea pig	Not classified
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	Mouse	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
butanone	In Vitro	Not mutagenic
ethyl acetate	In Vitro	Not mutagenic
ethyl acetate	In vivo	Not mutagenic
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	In Vitro	Not mutagenic
Polymer	In Vitro	Not mutagenic
Distillates (petroleum), hydrotreated light naphthenic	In Vitro	Some positive data exist, but the data are not sufficient for classification
Distillates (petroleum), hydrotreated light naphthenic	In vivo	Some positive data exist, but the data are not sufficient for classification
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
butanone	Inhalation	Human	Not carcinogenic
Distillates (petroleum), hydrotreated light naphthenic	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity
Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
butanone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not specified.	Not classified for female reproduction	Rat	NOAEL Not available	2 generation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not specified.	Not classified for male reproduction	Rat	NOAEL Not available	2 generation
Hydrocarbons, C7, n-alkanes, isoalkanes,	Not	Not classified for development	Rat	NOAEL Not	2 generation

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cyclics	specified.				available	
Distillates (petroleum), hydrotreated light naphthenic	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation	
Distillates (petroleum), hydrotreated light naphthenic	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation	
Distillates (petroleum), hydrotreated light naphthenic	Dermal	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	during gestation	
Distillates (petroleum), hydrotreated light naphthenic	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation	
Distillates (petroleum), hydrotreated light naphthenic	Dermal	Not classified for male reproduction	Rabbit	NOAEL 1,000 mg/kg/day	28 days	
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation	

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
butanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
butanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
butanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
butanone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
ethyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
ethyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	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
butanone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
butanone	Inhalation	liver kidney and/or bladder heart	Not classified	Rat	NOAEL 14.7 mg/l	90 days

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		endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system immune system muscles				
butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
butanone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
ethyl acetate	Inhalation	endocrine system liver nervous system	Not classified	Rat	NOAEL 0.043 mg/l	90 days
ethyl acetate	Inhalation	hematopoietic system	Not classified	Rabbit	LOAEL 16 mg/l	40 days
ethyl acetate	Ingestion	hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 3,600 mg/kg/day	90 days

Aspiration Hazard

Name	Value
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Aspiration hazard
Distillates (petroleum), hydrotreated light naphthenic	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
ethyl acetate	141-78-6	Bacteria	Experimental	18 hours	EC10	2,900 mg/l
ethyl acetate	141-78-6	Fish	Experimental	96 hours	LC50	212.5 mg/l
ethyl acetate	141-78-6	Invertebrate	Experimental	48 hours	EC50	165 mg/l
ethyl acetate	141-78-6	Green algae	Experimental	72 hours	NOEC	>100 mg/l
ethyl acetate	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l
butanone	78-93-3	Fathead minnow	Experimental	96 hours	LC50	2,993 mg/l
butanone	78-93-3	Green algae	Experimental	96 hours	ErC50	2,029 mg/l
butanone	78-93-3	Water flea	Experimental	48 hours	EC50	308 mg/l

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butanone	78-93-3	Green algae	Experimental	96 hours	ErC10	1,289 mg/l
butanone	78-93-3	Water flea	Experimental	21 days	NOEC	100 mg/l
butanone	78-93-3	Bacteria	Experimental	16 hours	LOEC	1,150 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Analogous Compound	72 hours	EL50	29 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Medaka	Analogous Compound	96 hours	LC50	0.561 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Analogous Compound	48 hours	EC50	0.4 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Estimated	72 hours	EL50	29 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Estimated	48 hours	EL50	3 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Rainbow trout	Experimental	96 hours	LL50	>13.4 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Analogous Compound	72 hours	NOEL	6.3 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Analogous Compound	21 days	NOEC	0.17 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Estimated	72 hours	NOEL	6.3 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Estimated	21 days	NOEL	1 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Activated sludge	Analogous Compound	15 hours	IC50	29 mg/l
DISTILLATES (PETROLEUM), C3-6, PIPERYLENE-RICH, POLYMERS WITH ISOBUTYLENE	152698-66-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Polymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Styrene-isoprene copolymer	25038-32-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	Green algae	Analogous Compound	96 hours	ErC50	>100 mg/l
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	Water flea	Experimental	48 hours	EC50	>100 mg/l
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	70750-57-1	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	70750-57-1	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	70750-57-1	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l

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Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	70750-57-1	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	70750-57-1	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
ethyl acetate	141-78-6	Experimental Biodegradation	14 days	BOD	94 %BOD/ThOD	OECD 301C - MITI test (I)
ethyl acetate	141-78-6	Experimental Photolysis		Photolytic half-life (in air)	20.0 days (t 1/2)	
butanone	78-93-3	Experimental Biodegradation	28 days	BOD	98 %BOD/ThOD	OECD 301D - Closed bottle test
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Analogous Compound Biodegradation	28 days	BOD	74.4 %BOD/ThOD	OECD 301F - Manometric respirometry
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Estimated Biodegradation	28 days	BOD	98 %BOD/CO D	OECD 301F - Manometric respirometry
DISTILLATES (PETROLEUM), C3-6, PIPERYLENE-RICH, POLYMERS WITH ISOBUTYLENE	152698-66-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Polymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Styrene-isoprene copolymer	25038-32-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	Experimental Biodegradation	28 days	BOD	42 %BOD/ThOD	OECD 301F - Manometric respirometry
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	70750-57-1	Experimental Biodegradation	28 days	BOD	8 %BOD/ThOD	OECD 301F - Manometric respirometry

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
ethyl acetate	141-78-6	Experimental Bioconcentration		Log Kow	0.68	
butanone	78-93-3	Experimental Bioconcentration		Log Kow	0.3	OECD 117 log Kow HPLC method
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Analogous Compound BCF - Fish	28 days	Bioaccumulation factor	540	OECD305-Bioconcentration
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Analogous Compound Bioconcentration		Log Kow	4.66	
DISTILLATES (PETROLEUM), C3-6, PIPERYLENE-RICH, POLYMERS WITH ISOBUTYLENE	152698-66-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Styrene-isoprene copolymer	25038-32-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	Modeled Bioconcentration		Log Kow	5.07	
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	70750-57-1	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
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Modeled Mobility in Soil	Koc	≥202 l/kg	Episuite™
Terpenes and Terpenoids, turpentine-oil, .alpha.-pinene fraction, polymd.	70750-57-1	Experimental Mobility in Soil	Koc	>232000 l/kg	OECD 121 Estim. of Koc by HPLC

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. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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
- 20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 - UN Number or ID number	UN1133	UN1133	UN1133

14.2 UN proper shipping name	ADHESIVES	ADHESIVES	ADHESIVES
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	II	II	II
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	F1	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

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
P5c FLAMMABLE LIQUIDS*	5000	50000

*If maintained at a temperature above its boiling point or if particular processing conditions, such as high pressure or high temperature, may create major-accident hazards, P5a or P5b FLAMMABLE LIQUIDS may apply

Seveso named dangerous substances, Annex 1, Part 2
None

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.
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

List of Relevant Notas

Nota L	The harmonised classification as a carcinogen applies unless it can be shown that the substance contains less than 3 % of dimethyl sulphoxide extract as measured by IP 346 ('Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method' Institute of Petroleum, London), in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.
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Revision information:

EU Section 14 - Table Data information was added.
EU Section 14 - Table Headers information was added.
Formulation: Section 16: Annex information was modified.
Industrial Use of Coatings: Section 16: Annex information was modified.
Professional Use of Coatings: Section 16: Annex information was modified.
Section 1: Address information was modified.
Section 1: E-mail address information was modified.
CLP: Ingredient table information was modified.
Section 02: CLP Physical and Health Hazard Statements information was modified.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Label: Graphic information was modified.

Section 3: Composition/ Information of ingredients table information was modified.
Section 04: First Aid - Symptoms and Effects (CLP) information was modified.
Section 4: First aid for ingestion (swallowing) information information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Eye/face protection information information was modified.
Section 8: glove data value information was added.
Section 8: glove data value information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: PNEC table row information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 9: Boiling point information information was modified.
Section 09: Color information was modified.
Section 9: Density information information was modified.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 9: Flash point information information was modified.
Section 09: Kinematic Viscosity information information was modified.
Section 9: Property description for optional properties information was modified.
Section 9: Relative density information information was modified.
Section 9: Specific physical form information information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
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 modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
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 deleted.
Section 14 Classification Code – Regulation Data information was deleted.
Section 14 Control Temperature – Main Heading information was deleted.
Section 14 Control Temperature – Regulation Data information was deleted.
Section 14 Emergency Temperature – Main Heading information was deleted.
Section 14 Emergency Temperature – Regulation Data information was deleted.
Section 14 Hazard Class + Sub Risk – Main Heading information was deleted.
Section 14 Hazard Class + Sub Risk – Regulation Data information was deleted.
Section 14 Other Dangerous Goods – Main Heading information was deleted.
Section 14 Other Dangerous Goods – Regulation Data information was deleted.
Section 14 Packing Group – Main Heading information was deleted.
Section 14 Packing Group – Regulation Data information was deleted.
Section 14 Proper Shipping Name information was deleted.
Section 14 Regulations – Main Headings information was deleted.
Section 14 Segregation – Regulation Data information was deleted.
Section 14 Segregation Code – Main Heading information was deleted.
Section 14 Special Precautions – Main Heading information was deleted.
Section 14 Special Precautions – Regulation Data information was deleted.
Section 14 Transport in bulk – Regulation Data information was deleted.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was deleted.
Section 14 UN Number Column data information was deleted.

Section 14 UN Number information was deleted.

Section 15: Seveso Substance Text information was deleted.

Section 16: Two-column table displaying the unique list of Notas for all components of the given material. information was added.

Annex

1. Title	
Substance identification	ethyl acetate; EC No. 205-500-4; CAS Nbr 141-78-6;
Exposure Scenario Name	Formulation
Lifecycle Stage	Formulation or re-packing
Contributing activities	PROC 05 -Mixing or blending in batch processes PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
Processes, tasks and activities covered	Mixing operations (open systems). (PROC 4,5) Open sampling. (PROC 9) Transfers with dedicated controls, including loading, filling, dumping, bagging. (PROC 8b) Transfers without dedicated controls, including loading, filling, dumping, bagging. (PROC 8a)
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Duration of exposure per day at workplace: 8 hours/day; Emission days (in days per year): 240 days per year; Indoor use; Task: PROC08a; Duration of exposure per day at workplace: <= 240 minutes per task; Task: PROC08b; Duration of exposure per day at workplace: <= 240 minutes per task;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Provide extract ventilation to points where emissions occur; Safety glasses with side shields.; Environmental: None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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	butanone; EC No. 201-159-0;

	CAS Nbr 78-93-3;
Exposure Scenario Name	Formulation
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
Processes, tasks and activities covered	Transfer of substances/mixtures into small containers or small reservoirs Transfers with dedicated controls, including loading, filling, dumping, bagging. (PROC 8b) Transfers without dedicated controls, including loading, filling, dumping, bagging. (PROC 8a)
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Duration of exposure per day at workplace: 8 hours/day;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Goggles - Chemical resistant; Local exhaust ventilation; Environmental: None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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	butanone; EC No. 201-159-0; CAS Nbr 78-93-3;
Exposure Scenario Name	Industrial Use of Coatings
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 05 -Mixing or blending in batch processes PROC 07 -Industrial spraying PROC 10 -Roller application or brushing 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. (PROC 7,10,11,13) Mixing operations (open systems). (PROC 4,5) Transfer of substances/mixtures into small containers or small reservoirs
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Duration of exposure per day at workplace: 8 hours/day; Task: PROC07; Air exchange rate: 10 - 15 ;
Risk management measures	Under the operational conditions described above the following risk management measures apply:

	<p>General risk management measures: Human health: Goggles - Chemical resistant; Environmental: None needed; ; The following task-specific risk management measures apply in addition to those listed above: Task: PROC05; Human Health; Local exhaust ventilation;</p> <p>Task: PROC07; Human Health; Half-facepiece air-purifying respirator;</p> <p>Task: PROC10; Human Health; Provide extract ventilation to points where emissions occur;</p> <p>Task: Transferring Material; Human Health; Half-facepiece air-purifying respirator;</p>
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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	
Exposure Scenario Name	Professional Use of Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 10 -Roller application or brushing PROC 11 -Non industrial spraying ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC 08b -Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
Processes, tasks and activities covered	Application of product with a roller or brush. (PROC 10) Spraying of substances/mixtures. (PROC 7,11) Transfers with dedicated controls, including loading, filling, dumping, bagging. (PROC 8b) Transfers without dedicated controls, including loading, filling, dumping, bagging. (PROC 8a)
2. Operational conditions and risk management measures	
Operating Conditions	<p>Physical state:Liquid. General operating conditions: Assumes use at not more than 20°C above ambient temperature; Duration of use: 8 hours/day;</p> <p>Task: Spraying; Outdoor use;</p>
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: None needed;

	<p>Environmental: None needed; ; The following task-specific risk management measures apply in addition to those listed above: Task: Indoor spraying; Human Health; Laminar Flow Booth;</p>
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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	ethyl acetate; EC No. 205-500-4; CAS Nbr 141-78-6;
Exposure Scenario Name	Professional Use of Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 10 -Roller application or brushing PROC 11 -Non industrial spraying ERC 08d -Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
Processes, tasks and activities covered	Application of product. (PROC 7,10,11,13) Spraying of substances/mixtures. (PROC 7,11)
2. Operational conditions and risk management measures	
Operating Conditions	<p>Physical state:Liquid. General operating conditions: Assumes use at not more than 20°C above ambient temperature; Duration of use: 8 hours/day; Outdoor use;</p> <p>Task: Spraying; Duration of use: 4 hours/day;</p>
Risk management measures	<p>Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: None needed; Environmental: None needed; ; The following task-specific risk management measures apply in addition to those listed above: Task: Spraying; Human Health; Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. Refer to Section 8 of the SDS for specific glove material.;</p>
Waste management measures	Incinerate in a permitted hazardous waste incinerator;
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	ethyl acetate; EC No. 205-500-4;

	CAS Nbr 141-78-6;
Exposure Scenario Name	Professional Use of Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 10 -Roller application or brushing ERC 08d -Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
Processes, tasks and activities covered	Application of product with a roller or brush. (PROC 10) Transfers without dedicated controls, including loading, filling, dumping, bagging. (PROC 8a)
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Emission days (in days per year): 300 days per year; Outdoor use; Task: PROC08a; Duration of exposure per day at workplace: <= 15 minutes per task; Task: PROC10; Duration of exposure per day at workplace: <= 240 minutes per task;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Provide extract ventilation to points where emissions occur; Safety glasses with side shields.; Environmental: None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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	ethyl acetate; EC No. 205-500-4; CAS Nbr 141-78-6;
Exposure Scenario Name	Professional Use of Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 11 -Non industrial spraying ERC 08d -Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
Processes, tasks and activities covered	Application of product. (PROC 7,10,11,13) Spraying of substances/mixtures. (PROC 7,11) Transfers without dedicated controls, including loading, filling, dumping, bagging. (PROC 8a)
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Emission days (in days per year): 300 days per year; Outdoor use;

	<p>Task: PROC08a; Duration of exposure per day at workplace: 8 hours/day;</p> <p>Task: PROC11; Duration of exposure per day at workplace: <= 240 minutes per task;</p>
Risk management measures	<p>Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Provide extract ventilation to points where emissions occur; Safety glasses with side shields.;</p> <p>Environmental: None needed;</p>
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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	butanone; EC No. 201-159-0; CAS Nbr 78-93-3;
Exposure Scenario Name	Professional Use of Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 05 -Mixing or blending in batch processes PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 10 -Roller application or brushing ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
Processes, tasks and activities covered	Application of product. (PROC 7,10,11,13) Mixing operations (open systems). (PROC 4,5) Transfer of substances/mixtures into small containers or small reservoirs
2. Operational conditions and risk management measures	
Operating Conditions	<p>Physical state:Liquid. General operating conditions: Duration of exposure per day at workplace: 8 hours/day;</p>
Risk management measures	<p>Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Goggles - Chemical resistant; Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour);</p> <p>Environmental: None needed; ; The following task-specific risk management measures apply in addition to those listed above: Task: Mixing; Human Health;</p>

	Half-facepiece air-purifying respirator; Task: Transferring Material; Human Health; Half-facepiece air-purifying respirator;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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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