

Safety Data Sheet

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

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

1.1. Product identifier

3M Scotchkote Urethane Aluminium Primer MCU 125

Product Identification Numbers GR-2001-0303-8

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

Identified uses Coating.

1.3. Details of the supplier of the substance or mixture

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

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Flammable Liquid, Category 3 - Flam. Liq. 3; H226 Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319 Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315 Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334 Skin Sensitization, Category 1 - Skin Sens. 1; H317 Carcinogenicity, Category 2 - Carc. 2; H351 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336 Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373

Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

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

Indication of danger Flammable; R10 Carcinogenic; Carc. Cat. 3; R40 Harmful; Xn; R20 Irritant; Xi; R36/37/38 Sensitizing; R42/43 Harmful; Xn; R48/20 Dangerous for the environment; R52/53

For full text of R 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



Ingredient	CAS Nbr	% by Wt
Solvent naphtha (petroleum), light aromatic	64742-95-6	10 - 20
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	7 - 13
Formaldehyde, oligomeric reaction products with aniline and phosgene	32055-14-4	5 - 10
Naphtha (petroleum), hydrotreated heavy	64742-48-9	5 - 10
Diphenylmethane-2,4'-diisocyanate	5873-54-1	1 - 5
p-toluenesulphonyl isocyanate	4083-64-1	0.5 - 1.0
2,2'-methylenediphenyl diisocyanate	2536-05-2	< 0.1

HAZARD STATEMENTS:	
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:	
P210A	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.
Response:	
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present
	and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P331	Do NOT induce vomiting.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P370 + P378G	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.
Disposal:	

P501

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

31% of the mixture consists of components of unknown acute oral toxicity.

46% of the mixture consists of components of unknown acute inhalation toxicity. Contains 52% of components with unknown hazards to the aquatic environment.

Notes on labelling

H304 is not required on the label due to the product's viscosity Nota P applied to CASRN 64742-95-6 and CASRN 64742-48-9.

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

Symbol(s)



Contains:

1,2,4-Trimethylbenzene; Diphenylmethane-2,4'-diisocyanate; Formaldehyde, oligomeric reaction products with aniline and phosgene; P,P'-Methylenebis(phenyl isocyanate)

Risk phrases	
R10	Flammable.
R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R40	Limited evidence of a carcinogenic effect.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety phrases

S23C	Do not breathe vapour or spray.
S51	Use only in well ventilated areas.
S36/37	Wear suitable protective clothing and gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

Special provisions concerning the labelling of certain substances

Contains isocyanates. See information supplied by manufacturer.

Notes on labelling

R65 is not required on the label due to the product's viscosity.

Nota P applied to CASRNs 64742-95-6 and 64742-48-9.

2.3. Other hazards

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Non-Hazardous Ingredients	Mixture		20 - 30	
Solvent naphtha (petroleum), light aromatic	64742-95-6	EINECS 265- 199-0	10 - 20	Xn:R65 - Nota 4,P (EU) R10 (Vendor) Xi:R38; R67 (Self Classified)
				Asp. Tox. 1, H304 - Nota P (CLP)
				Flam. Liq. 3, H226 (Vendor) Skin Irrit. 2, H315; STOT SE 3, H336 (Self Classified)
Aluminium	7429-90-5	EINECS 231- 072-3	10 - 20	F:R11-15 - Nota T (EU)
				Flam. Sol. 1, H228; Water-react. 2, H261 - Nota T (CLP)
1,2,4-Trimethylbenzene	95-63-6	EINECS 202- 436-9	10 - 20	Xn:R20; Xi:R36-37-38; N:R51/53; R10 (EU)
				Flam. Liq. 3, H226; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 2, H411 (CLP)
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	EINECS 202- 966-0	7 - 13	Carc.Cat.3:R40; Xn:R20-48/20; Xi:R36-37-38; R42-43 - Nota 2,C (EU)
				Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1, H334; Skin Sens. 1, H317; Carc. 2, H351; STOT SE 3, H335; STOT RE 2, H373 - Nota 2,C (CLP)

Formaldehyde, oligomeric reaction products	32055-14-4	NLP 500-079-	5 - 10	Carc.Cat.3:R40; Xn:R20-48/20;
with aniline and phosgene		6		Xi:R36-37-38; R42-43 (Vendor)
				Acute Tox. 4, H332; Skin Irrit.
				2, H315; Eye Irrit. 2, H319; Resp. Sens. 1, H334; Skin Sens.
				1, H317; Carc. 2, H351; STOT
				SE 3, H335; STOT RE 2, H373
				(Vendor)
Naphtha (petroleum), hydrotreated heavy	64742-48-9	EINECS 265-	5 - 10	Xn:R65 - Nota 4,P (EU) Vi P_{29} , P_{17} (Salf Classified)
		150-3		Xi:R38; R67 (Self Classified)
				Asp. Tox. 1, H304 - Nota P
				(CLP)
				Skin Irrit. 2, H315; STOT SE 3,
N-Propylbenzene	103-65-1	EINECS 203-	1 - 5	H336 (Self Classified) Xn:R65; Xi:R37; N:R51/53; R10
IV-I Topytoenzene	105-05-1	132-9	1 - 5	- Nota 4 (EU)
				Flam. Liq. 3, H226; Asp. Tox. 1,
				H304; STOT SE 3, H335;
	5052 54 1		1.5	Aquatic Chronic 2, H411 - Nota C (CLP)
Diphenylmethane-2,4'-diisocyanate	5873-54-1	EINECS 227- 534-9	1 - 5	Carc.Cat.3:R40; Xn:R20-48/20; Xi:R36-37-38; R42-43 - Nota
		554-9		2,C (EU)
				Acute Tox. 4, H332; Skin Irrit.
				2, H315; Eye Irrit. 2, H319;
				Resp. Sens. 1, H334; Skin Sens.
				1, H317; Carc. 2, H351; STOT SE 3, H335; STOT RE 2, H373 -
				Nota 2,C (CLP)
p-toluenesulphonyl isocyanate	4083-64-1	EINECS 223-	0.5 - 1.0	Xi:R36-37-38; R42; R14 (EU)
		810-8		R52/53 (Self Classified)
				EUH014; Skin Irrit. 2, H315;
				Eye Irrit. 2, H319; Resp. Sens. 1,
				H334; STOT SE 3, H335 (CLP) Aquatic Chronic 3, H412 (Self
				Classified)
2,2'-methylenediphenyl diisocyanate	2536-05-2	EINECS 219-	< 0.1	Carc.Cat.3:R40; Xn:R20-48/20;
		799-4		Xi:R36-37-38; R42-43 - Nota
				2,C (EU)
				Acute Tox. 4, H332; Skin Irrit.
				2, H315; Eye Irrit. 2, H319;
				Resp. Sens. 1, H334; Skin Sens.
				1, H317; Carc. 2, H351; STOT
				SE 3, H335; STOT RE 2, H373 - Nota 2,C (CLP)
Please see section 16 for the full text of any				Nota 2,C (CLP)

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

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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 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

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>
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen cyanide.	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Advice for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

Avoid release to the environment. 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. An appropriate aqueous film forming foam (AFFF) is recommended. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. 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 container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. 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. Dispose of collected material 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 or professional use only. Do not use in a confined area with minimal air exchange. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. 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 vapor accumulation. Vapours may travel long distances along the ground or floor to an ignition source and flash back.

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 strong bases. 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

Ingredient Free isocyanates	CAS Nbr 101-68-8	Agency Manufacturer determined	Limit type TWA:0.005 ppm;STEL:0.02 ppm	Additional comments
Free isocyanates	101-68-8	Health and Safety Comm. (UK)	TWA(as NCO):0.02 mg/m3;STEL(as NCO):0.07 mg/m3	Respiratory Sensitizer
Free isocyanates	2536-05-2	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	2536-05-2	Health and	TWA(as NCO):0.02	Respiratory Sensitizer

		Safety Comm. (UK)	mg/m3;STEL(as NCO):0.07 mg/m3	
Free isocyanates	5873-54-1	Manufacturer	TWA:0.005 ppm;STEL:0.02	
		determined	ppm	
Free isocyanates	5873-54-1	Health and	TWA(as NCO):0.02	Respiratory Sensitizer
		Safety Comm.	mg/m3;STEL(as NCO):0.07	
		(UK)	mg/m3	
Naphtha (petroleum),	64742-48-9	Manufacturer	TWA:100 ppm	
hydrotreated heavy		determined	11	
Aluminium	7429-90-5	Health and	TWA(as inhalable dust):10	
		Safety Comm.	mg/m ³ ;TWA(as respirable	
		(UK)	dust):4 mg/m ³	
Benzene, trimethyl-	95-63-6	Health and	TWA:125 mg/m3(25 ppm)	
Denzene, unitetityr	<i>)))))))) i i i i i i i i i i</i>	Safety Comm.	1 WA.125 mg/m5(25 ppm)	
		-		
		(UK)		
Health and Safety Comm. (UK) : UK Heal	th and Safety Cor	nmission		

Health and Safety Comm. (UK) : UK Health and Safety Commission TWA: Time-Weighted-Average STEL: Short Term Exposure Limit CEIL: Ceiling

Biological limit values

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

8.2. Exposure controls

8.2.1. Engineering controls

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. Curing enclosures must be exhausted to outdoors or to a suitable emission control device.

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.

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

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

In case of inadequate ventilation wear respiratory protection. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure: Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

Half facepiece or full facepiece supplied-air respirator

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical proj	perties
Physical state	Liquid.
Specific Physical Form:	Viscous liquid
Appearance/Odour	Aromatic solvent odour; Silver grey colour
Odour threshold	No data available.
рН	Not applicable.
Boiling point/boiling range	>=155 °C
Melting point	Not applicable.
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	40 °C [Test Method:Closed Cup]
Autoignition temperature	>=240 °C
Flammable Limits(LEL)	0.6 % volume
Flammable Limits(UEL)	7 % volume
Vapour pressure	2,133.2 Pa
Relative density	1.07 [<i>Ref Std</i> :WATER=1]
Water solubility	Negligible
Solubility- non-water	Nil
Partition coefficient: n-octanol/water	No data available.
Evaporation rate	No data available.
Vapour density	No data available.
Decomposition temperature	No data available.
Viscosity	>=0.1 Pa-s [<i>Test Method</i> :Brookfield]
Density	1.07 g/ml
9.2. Other information	
Volatile organic compounds (VOC) Percent volatile	395 g/l [<i>Test Method</i> :Estimated] [<i>Details</i> :EU Definition] 40 %

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** Alcohols. Amines. Strong acids. Strong bases.

10.6 Hazardous decomposition products

<u>Substance</u>

None known.

Condition

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 3M assessments.

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

Toxic if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause target organ effects after inhalation.

Skin contact

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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 target organ effects after ingestion.

Target Organ Effects:

Single exposure may cause:

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

Prolonged or repeated exposure may cause:

Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Additional information:

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation- Dust/Mist(4 hr)		No data available; calculated ATE0.5 - 1 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
1,2,4-Trimethylbenzene	Dermal	Rabbit	LD50 > 3,160 mg/kg
1,2,4-Trimethylbenzene	Inhalation-	Rat	LC50 18 mg/l
1,2,4-11iniculyiochizene	Vapor (4	Kat	
	hours)		
1,2,4-Trimethylbenzene	Ingestion	Rat	LD50 3,400 mg/kg
Solvent naphtha (petroleum), light aromatic	Dermal	Rabbit	LD50 > 2,000 mg/kg
Solvent naphtha (petroleum), light aromatic	Inhalation-	Rat	LC50 > 5.2 mg/l
	Vapor (4		-
	hours)		
Solvent naphtha (petroleum), light aromatic	Ingestion	Rat	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Inhalation-		LC50 estimated to be 10 - 20 mg/l
	Vapor		
P,P'-Methylenebis(phenyl isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Inhalation-	Rat	LC50 0.369 mg/l
	Dust/Mist		
	(4 hours)		
P,P'-Methylenebis(phenyl isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
Aluminium	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
Aluminium	Ingestion	D /	LD50 estimated to be $>$ 5,000 mg/kg
Aluminium	Inhalation-	Rat	LC50 > .888 mg/l
	Dust/Mist (4 hours)		
Naphtha (petroleum), hydrotreated heavy	Inhalation-		LC50 estimated to be 20 - 50 mg/l
Napitila (peroleum), nyuloiteateu neavy	Vapor		LC50 estimated to be 20 - 50 mg/r
Naphtha (petroleum), hydrotreated heavy	Dermal	Rabbit	LD50 > 3,000 mg/kg
Naphtha (petroleum), hydrotreated heavy	Ingestion	Rat	LD50 > 5,000 mg/kg
Diphenylmethane-2,4'-diisocyanate	Inhalation-		LC50 estimated to be 10 - 20 mg/l
r - j	Vapor		
Diphenylmethane-2,4'-diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Diphenylmethane-2,4'-diisocyanate	Inhalation-	Rat	LC50 0.369 mg/l
	Dust/Mist		
	(4 hours)		
Diphenylmethane-2,4'-diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
N-Propylbenzene	Dermal		LD50 estimated to be > 5,000 mg/kg
N-Propylbenzene	Ingestion	Rat	LD50 6,040 mg/kg
2,2'-methylenediphenyl diisocyanate	Inhalation- Vapor		LC50 estimated to be 10 - 20 mg/l
2,2'-methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2,2'-methylenediphenyl diisocyanate	Inhalation-	Rat	LC50 0.369 mg/l
	Dust/Mist		
	(4 hours)		
2,2'-methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
1,2,4-Trimethylbenzene	Rabbit	Irritant
Solvent naphtha (petroleum), light aromatic	Rabbit	Irritant
P,P'-Methylenebis(phenyl isocyanate)	official	Irritant
	classifica	
	tion	
Aluminium	Rabbit	No significant irritation

Naphtha (petroleum), hydrotreated heavy	Rabbit	Irritant
Diphenylmethane-2,4'-diisocyanate	official	Irritant
	classifica	
	tion	
2,2'-methylenediphenyl diisocyanate	official	Irritant
	classifica	
	tion	

Serious Eye Damage/Irritation

Name	Species	Value
1,2,4-Trimethylbenzene	Rabbit	Mild irritant
Solvent naphtha (petroleum), light aromatic	Rabbit	Mild irritant
P,P'-Methylenebis(phenyl isocyanate)	official	Severe irritant
	classifica	
	tion	
Aluminium	Rabbit	No significant irritation
Naphtha (petroleum), hydrotreated heavy	Rabbit	No significant irritation
Diphenylmethane-2,4'-diisocyanate	official	Severe irritant
	classifica	
	tion	
2,2'-methylenediphenyl diisocyanate	official	Severe irritant
	classifica	
	tion	

Skin Sensitisation

Name	Species	Value
1,2,4-Trimethylbenzene	Guinea	Not sensitizing
	pig	
Solvent naphtha (petroleum), light aromatic	Guinea	Not sensitizing
	pig	
P,P'-Methylenebis(phenyl isocyanate)	official	Sensitising
	classificat	
	ion	
Aluminium	Guinea	Not sensitizing
	pig	
Naphtha (petroleum), hydrotreated heavy	Guinea	Not sensitizing
	pig	
Diphenylmethane-2,4'-diisocyanate	official	Sensitising
	classificat	
	ion	
2,2'-methylenediphenyl diisocyanate	official	Sensitising
	classificat	
	ion	

Respiratory Sensitisation

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Human	Sensitising
Aluminium	Human	Some positive data exist, but the data are not sufficient for classification
Diphenylmethane-2,4'-diisocyanate	Human	Sensitising
2,2'-methylenediphenyl diisocyanate	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
1,2,4-Trimethylbenzene	In Vitro	Not mutagenic
P,P'-Methylenebis(phenyl isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Aluminium	In Vitro	Not mutagenic
Naphtha (petroleum), hydrotreated heavy	In vivo	Not mutagenic
Naphtha (petroleum), hydrotreated heavy	In Vitro	Some positive data exist, but the data are not sufficient for classification
Diphenylmethane-2,4'-diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,2'-methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Solvent naphtha (petroleum), light aromatic	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Naphtha (petroleum), hydrotreated heavy	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Naphtha (petroleum), hydrotreated heavy	Inhalation	Human and animal	Some positive data exist, but the data are not sufficient for classification
Diphenylmethane-2,4'-diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
2,2'-methylenediphenyl diisocyanate	Inhalation	Rat	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
1,2,4-Trimethylbenzene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 1.5 mg/l	during gestation
Solvent naphtha (petroleum), light aromatic	Inhalation	Not toxic to female reproduction	Rat	NOAEL 1,500 ppm	2 generation
Solvent naphtha (petroleum), light aromatic	Inhalation	Not toxic to male reproduction	Rat	NOAEL 1,500 ppm	2 generation
Solvent naphtha (petroleum), light aromatic	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 500 ppm	2 generation
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis
Naphtha (petroleum), hydrotreated heavy	Inhalation	Not toxic to development	Rat	NOAEL 2.4 mg/l	during organogenesis
Diphenylmethane-2,4'-diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis
2,2'-methylenediphenyl diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
1,2,4-Trimethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
1,2,4-Trimethylbenzene	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
Solvent naphtha (petroleum), light aromatic	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Solvent naphtha (petroleum), light aromatic	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Solvent naphtha	Ingestion	central nervous	May cause drowsiness or		NOAEL Not	

(petroleum), light aromatic		system depression	dizziness		available	
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
Naphtha (petroleum), hydrotreated heavy	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Naphtha (petroleum), hydrotreated heavy	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Naphtha (petroleum), hydrotreated heavy	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 6.5 mg/l	4 hours
Diphenylmethane-2,4'- diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
2,2'-methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
1,2,4-Trimethylbenzene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.5 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.1 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
1,2,4-Trimethylbenzene	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	heart endocrine system immune system	All data are negative	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-Trimethylbenzene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	14 days
1,2,4-Trimethylbenzene	Ingestion	liver immune system kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Aluminium	Inhalation	nervous system respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Naphtha (petroleum), hydrotreated heavy	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 4.6 mg/l	6 months
Naphtha (petroleum), hydrotreated heavy	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1.9 mg/l	13 weeks
Naphtha (petroleum), hydrotreated heavy	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.6 mg/l	90 days
Naphtha (petroleum), hydrotreated heavy	Inhalation	bone, teeth, nails, and/or hair blood liver muscles	All data are negative	Rat	NOAEL 5.6 mg/l	12 weeks
Naphtha (petroleum), hydrotreated heavy	Inhalation	heart	All data are negative	Multiple animal species	NOAEL 1.3 mg/l	90 days
Diphenylmethane-2,4'- diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
2,2'-methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks

Aspiration Hazard

Name	Value
1,2,4-Trimethylbenzene	Aspiration hazard
Solvent naphtha (petroleum), light aromatic	Aspiration hazard
Naphtha (petroleum), hydrotreated heavy	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 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 Nbr	Organism	Туре	Exposure	Test endpoint	Test result
1,2,4-	95-63-6	Fathead	Experimental	96 hours	LC50	7.72 mg/l
Trimethylbenz		minnow				
ene						
1,2,4-	95-63-6	Water flea	Experimental	48 hours	EC50	3.6 mg/l
Trimethylbenz						
ene						
1,2,4-	95-63-6	Mysid Shrimp	Experimental	96 hours	EC50	2 mg/l
Trimethylbenz						
ene						
Diphenylmetha	5873-54-1	Water flea	Estimated	24 hours	EC50	>500 mg/l
ne-2,4'-						
diisocyanate						
N-	103-65-1	Rainbow trout	Experimental	96 hours	LC50	1.55 mg/l
Propylbenzene						
N-	103-65-1	Water flea	Experimental	24 hours	EC50	2 mg/l
Propylbenzene						
N-	103-65-1	Green Algae	Experimental	72 hours	EC50	1.8 mg/l
Propylbenzene						
p-	4083-64-1	Green Algae	Experimental	72 hours	EC50	23 mg/l
toluenesulphon						
yl isocyanate						
p-	4083-64-1	Ricefish	Experimental	96 hours	LC50	435 mg/l
toluenesulphon						
yl isocyanate						
p-	4083-64-1	Water flea	Experimental	24 hours	EC50	150 mg/l
toluenesulphon						
yl isocyanate						
p-	4083-64-1	Water flea	Experimental	21 days	NOEC	47 mg/l
toluenesulphon						
yl isocyanate						
Aluminium	7429-90-5		Data not			
			available or			
			insufficient for			

		classification		
2,2'-	2536-05-2	Data not		
methylenediph		available or		
enyl		insufficient for		
diisocyanate		classification		
Formaldehyde,	32055-14-4	Data not		
oligomeric		available or		
reaction		insufficient for		
products with		classification		
aniline and				
phosgene				
Non-	Mixture	Data not		
Hazardous		available or		
Ingredients		insufficient for		
		classification		
Solvent	64742-95-6	Data not		
naphtha		available or		
(petroleum),		insufficient for		
light aromatic		classification		
Naphtha	64742-48-9	Data not		
(petroleum),		available or		
hydrotreated		insufficient for		
heavy		classification		
P,P'-	101-68-8	Data not		
Methylenebis(available or		
phenyl		insufficient for		
isocyanate)		classification		

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
N-	103-65-1	Experimental		Photolytic half-	5.17 days (t	Other methods
Propylbenzene		Photolysis		life (in air)	1/2)	
1,2,4-	95-63-6	Experimental		Photolytic half-	11.8 hours (t	Other methods
Trimethylbenz		Photolysis		life (in air)	1/2)	
ene						
Non- Hazardous Ingredients	Mixture	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
p- toluenesulphon yl isocyanate	4083-64-1	Estimated Hydrolysis		Hydrolytic half-life	<10 minutes (t 1/2)	Other methods
Solvent naphtha (petroleum), light aromatic	64742-95-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Aluminium	7429-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
P,P'- Methylenebis(phenyl isocyanate)	101-68-8	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods

2,2'-	2536-05-2	Experimental		Hydrolytic	<2 hours (t	Other methods
methylenediph		Hydrolysis		half-life	1/2)	
enyl						
diisocyanate						
Diphenylmetha	5873-54-1	Estimated		Hydrolytic	<2 hours (t	Other methods
ne-2,4'-		Hydrolysis		half-life	1/2)	
diisocyanate						
Formaldehyde,	32055-14-4	Data not	N/A	N/A	N/A	N/A
oligomeric		available or				
reaction		insufficient for				
products with		classification				
aniline and						
phosgene						
p-	4083-64-1	Experimental	28 days	BOD	3 % weight	OECD 301C - MITI
toluenesulphon		Biodegradation				test (I)
yl isocyanate						
Naphtha	64742-48-9	Data not	N/A	N/A	N/A	N/A
(petroleum),		available or				
hydrotreated		insufficient for				
heavy		classification				
1,2,4-	95-63-6	Experimental	28 days	BOD	4 % weight	OECD 301C - MITI
Trimethylbenz		Biodegradation	-			test (I)
ene		_				
P,P'-	101-68-8	Experimental	28 days	BOD	0 % weight	OECD 301C - MITI
Methylenebis(Biodegradation	-		-	test (I)
phenyl						
isocyanate)						
2,2'-	2536-05-2	Experimental	28 days	BOD	0 % weight	OECD 301C - MITI
		Biodegradation	-		Ũ	test (I)
enyl						
diisocyanate						
Diphenylmetha	5873-54-1	Estimated	28 days	BOD	0 % weight	OECD 301C - MITI
ne-2,4'-					E .	test (I)
· · · · · · · · · · · · · · · · · · ·						
ene P,P'- Methylenebis(phenyl isocyanate) 2,2'- methylenediph enyl diisocyanate Diphenylmetha	2536-05-2	Experimental Biodegradation Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I) OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Non-	Mixture	Data not	N/A	N/A	N/A	N/A
Hazardous		available or				
Ingredients		insufficient for				
		classification				
Aluminium	7429-90-5	Data not	N/A	N/A	N/A	N/A
		available or				
		insufficient for				
		classification				
Formaldehyde,	32055-14-4	Data not	N/A	N/A	N/A	N/A
oligomeric		available or				
reaction		insufficient for				
products with		classification				
aniline and						
phosgene						
Solvent	64742-95-6	Data not	N/A	N/A	N/A	N/A
naphtha		available or				
(petroleum),		insufficient for				

light aromatic		classification				
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,2,4- Trimethylbenz ene	95-63-6	Experimental BCF-Carp	56 days	Bioaccumulati on factor	275	Other methods
P,P'- Methylenebis(phenyl isocyanate)	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulati on factor	200	Other methods
2,2'- methylenediph enyl diisocyanate	2536-05-2	Experimental BCF-Carp	28 days	Bioaccumulati on factor	200	Other methods
Diphenylmetha ne-2,4'- diisocyanate	5873-54-1	Estimated BCF-Carp	28 days	Bioaccumulati on factor	200	Other methods
p- toluenesulphon yl isocyanate	4083-64-1	Experimental Bioconcentrati on		Log Kow	0.82	Other methods
N- Propylbenzene	103-65-1	Experimental Bioconcentrati on		Log Kow	3.69	Other methods

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste 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 01 11* Waste paint and varnish containing organic solvents or other dangerous substances

SECTION 14: Transportation information

GR-2001-0303-8

С

ADR/RID: UN1263, PAINT RELATED MATERIAL, LIMITED QUANTITY, 3., III, (E), ADR Classification Code: F1. IMDG-CODE: UN1263, PAINT RELATED MATERIAL, 3, III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FE,SE. ICAO/IATA: UN1263, PAINT RELATED MATERIAL, 3., III.

SECTION 15: Regulatory information

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

Cai	•cinogenicity			
	Ingredient	CAS Nbr	Classification	Regulation
	2,2'-methylenediphenyl diisocyanate	2536-05-2	Carc. 2	Regulation (EC) No.
				1272/2008, Table 3.1
	2,2'-methylenediphenyl diisocyanate	2536-05-2	Carc.Cat.3	Regulation (EC) No.
				1272/2008, Table 3.2
	Diphenylmethane-2,4'-diisocyanate	5873-54-1	Carc. 2	Regulation (EC) No.
				1272/2008, Table 3.1
	Diphenylmethane-2,4'-diisocyanate	5873-54-1	Carc.Cat.3	Regulation (EC) No.
				1272/2008, Table 3.2
	Formaldehyde, oligomeric reaction products with	32055-14-4	Carc. 2	Vendor classified
	aniline and phosgene			according to
				Regulation (EC) No
				1272/2008
	Formaldehyde, oligomeric reaction products with	32055-14-4	Carc.Cat.3	Vendor classified
	aniline and phosgene			according to Directive
				67/548/EEC
	P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Carc. 2	Regulation (EC) No.
				1272/2008, Table 3.1
	P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Carc.Cat.3	Regulation (EC) No.
				1272/2008, Table 3.2
	P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Gr. 3: Not classifiable	International Agency
				for Research on Cancer

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components 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 material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. 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.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

EUH014	Reacts violently with water.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H261	In contact with water releases flammable gas.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

List of relevant R-phrases

List of Ferenant P	
R10	Flammable.
R11	Highly flammable.
R14	Reacts violently with water.
R15	Contact with water liberates highly flammable gases.
R20	Harmful by inhalation.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37	Irritating to respiratory system.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R42	May cause sensitisation by inhalation.
R42/43	May cause sensitisation by inhalation and skin contact.
R43	May cause sensitisation by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51/53	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R65	Harmful: May cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

Revision information:

Revision Changes:

Section 8: Skin protection - recommended gloves information information was modified.

Section 8: Respiratory protection - recommended respirators information information was modified.

Risk phrase information was modified.

- Section 8: Personal Protection Skin/body information information was modified.
- Section 8: Skin protection protective clothing information information was modified.
- Section 2: Label ingredient information information was modified.
- Section 1: Product identification numbers heading information was modified.
- Section 9: Viscosity information information was modified.
- Section 15: Carcinogenicity information information was modified.
- Section 3: Composition/ Information of ingredients table information was modified.
- Section 2: Indication of danger information information was modified.
- Section 16: Regulations Inventories EU ONLY information was modified.
- Section 8: Occupational exposure limit table information was modified.

Telephone header information was modified.

Company Telephone information was modified. Section 11: Acute Toxicity table information was modified. Section 11: Carcinogenicity Table information was modified. Section 11: Serious Eye Damage/Irritation Table information was modified. Section 11: Germ Cell Mutagenicity Table information was modified. Section 11: Skin Sensitization Table information was modified. Section 11: Respiratory Sensitization Table information was modified. Section 11: Reproductive Toxicity Table information was modified. Section 11: Skin Corrosion/Irritation Table information was modified. Section 11: Target Organs - Repeated Table information was modified. Section 11: Target Organs - Single Table information was modified. Section 11: Health Effects - Inhalation information information was modified. Section 5: Fire - Extinguishing media information information was modified. Section 8: Personal Protection - Eye information information was modified. Section 13: Standard Phrase Category Waste GHS information was modified. Section 4: First aid for inhalation information information was modified. Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified. Label: Graphic information was modified. Section 9: Specific physical form information information was added. Section 9: Specific physical form heading information was added. Section 12: Component ecotoxicity information information was added. Section 12: Persistence and Degradability information information was added. Section 12:Bioccumulative potential information information was added. Section 12: Component Ecotoxicity table Material column header information was added. Section 12: Component Ecotoxicity table CAS No column header information was added. Section 12: Component Ecotoxicity table Organism column header information was added. Section 12: Component Ecotoxicity table Type column header information was added. Section 12: Component Ecotoxicity table Exposure column header information was added. Section 12: Component Ecotoxicity table End point column header information was added. Section 12: Component Ecotoxicity table Result column header information was added. Section 12: Persistence and degradability table Material column header information was added. Section 12: Persistence and degradability table CAS No column header information was added. Section 12: Persistence and degradability table Test Type column header information was added. Section 12: Persistence and degradability table Duration column header information was added. Section 12: Persistence and degradability table Test Result column header information was added. Section 12: Persistence and degradability table Protocol column header information was added. Section 12:Bioccumulative potential table Material column header information was added. Section 12:Bioccumulative potential table CAS No column header information was added. Section 12:Bioccumulative potential table CAS No column header information was added. Section 12:Bioccumulative potential table Test Result column header information was added. Section 12:Bioccumulative potential table Protocol column header information was added. Section 12:Bioccumulative potential table Test Type column header information was added. Label: Signal Word - Header information was added. Label: Signal Word information was added. Label: CLP Classification - Header information was added. Label: CLP Classification information was added. Label: CLP Classification information was added. Label: CLP Classification - Header information was added. Label: CLP Percent Unknown information was added. Label: CLP Percent Unknown information was added. Label: CLP Percent Unknown information was added. Label: CLP Environmental Hazard Statements information was added. Label: Graphic information was added. Label: Graphic information was added. Label: Symbol information was added.

Label: Symbol information was added. Label: CLP Precautionary - Disposal information was added. Label: CLP Precautionary - Disposal - Header information was added. Label: CLP Precautionary - Prevention information was added. Label: CLP Precautionary - Prevention - Header information was added. Label: CLP Precautionary - Response information was added. Label: CLP Precautionary - Response - Header information was added. Label: Precautionary Statement - Header information was added. CLP: Ingredient table information was added. Section 2: Notes on labelling heading information was added. Section 15: Label remarks and EU Detergent information was added. CLP Remark(phrase) information was added. Section 2: 2.2 & 2.3. CLP REGULATION heading information was added. Label: CLP Ingredients table Ingredient heading information was added. Label: CLP Ingredients table CAS No heading information was added. Label: CLP Ingredients table Percent by Wt heading information was added. Section 12: Persistence and degradability table Study Type column header information was added. Section 12:Bioccumulative potential table Test Type column header information was added. Section 09: Solubility as text (non-water) information was added. Section 2: H phrase reference information was added. Label: CLP Target Organ Hazard Statement Heading information was added. Label: CLP Target Organ Hazard Statement information was added. Section 12: Classification Warning information was added. Section 11: Classification disclaimer information was added. Section 8: 8.1.1 Biological limit values table heading information was added. Section 8: BLV information was added. Prints No Data if Component ecotoxicity information is not present information was deleted. Prints No Data if Persistence and Degradability information is not present information was deleted. Prints No Data if Bioccumulative potential information is not present information was deleted. Label: CLP Supplemental Hazard Statements information was deleted. Label: CLP Supplemental Hazard Statements - Header information was deleted. Label: CLP Supplemental Information - Header information was deleted. Section 11: Classification disclaimer information was deleted. Section 12: Classification Warning information was deleted. Label: Graphic Text information was deleted. Section 9: Solubility (non-water) information was deleted.

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