SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

HardieFoam™ Adhesive

Publication date: 08/07/19

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

1.1. Product identifier

Product name:	HardieFoam
Registration number REACH:	Not applicable (mixture)
Product type REACH:	Mixture

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

1.2.1	Relevant identified uses:	Polyurethane
1.2.2	Uses advised against:	No uses advised against known

1.3. Details of the manufacturer/supplier of the safety data sheet

James Hardie Europe GmbH, 7 The Priory, Old London Road, Canwell, Sutton Coldfield, B75 5SH
T: 0121 311 3480, E: info@jameshardie.co.uk

1.4. Emergency telephone number

24h: 07827 974021

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aerosol	Category 1	H222: Extremely flammable aerosol.
Aerosol	Category 1	H229: Pressurised container: May burst if heated.
Carc.	Category 2	H351: Suspected of causing cancer.
Acute Tox	Category 4	H332: Harmful if inhaled.
STOT RE	Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Eye Irrit	Category 2	H319: Causes serious eye irritation.
STOT SE	Category 3	H335: May cause respiratory irritation.
Skin Irrit.	Category 2	H315: Causes skin irritation.
Resp. Sens	Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens.	Category 1	H317: May cause an allergic skin reaction.

2.2. Label elements

Contains: Polymethylene polyphenyl isocyanate.
Signal word: Danger
H-statements:
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H351 Suspected of causing cancer.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H315 Causes skin irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.

P-statements: P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F.
P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

Supplemental information

- Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
- Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
- This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard
Contains component(s) included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

SECTION 3: Composition/information on ingredients

3.1. Substances: Not applicable
3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
Tris (2-chloro-1-methylethyl) phosphate 01-2119486772-26	13674-84-5 237-158-7	%<C<25%	Acute Tox. 4; H302	(1)(10)	Consituent
polymethylene polyphenyl isocyanate	9016-87-9	C>25%	Carc. 2; H351 Acute Tox. 4; H332 STOT RE 2; H373 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H334 Skin Sens. 1; H317	(1)(2)(8)(10)	Polymer
1,1-difluoroethane 01-2119474440-43	75-37-6 200-866-1	1%<C<10%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(10)	Propellant
propane 01-2119486944-21	74-98-6 200-827-9	1%<C<10%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
isobutane 01-2119485395-27	75-28-5 200-857-2	1%<C<10%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
dimethyl ether 01-2119472128-37	115-10-6 204-065-8	1%<C<10%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
(1,3-butadiene, conc<0.1%)					

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006
(1) For H-statements in full: see heading 16
(8) Specific concentration limits, see heading 16
(2) Substance with a Community workplace exposure limit

SECTION 4: First aid measures

4.1. Description of first aid measures

General: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact: Wash immediately with lots of water. Take victim to a doctor if irritation persists.

After eye contact: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Consult a doctor/medical service if you feel

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

4.2.1 Acute symptoms

After inhalation: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Runny nose. FOLLOWING SYMPTOMS MAY APPEAR

LATER: Possible inflammation of the respiratory tract. Risk of lung oedema. Respiratory difficulties.

After skin contact: Tingling/irritation of the skin.

After eye contact: Irritation of the eye tissue. Lacrimation.

After ingestion: Not applicable.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media: Quantities of water. Polyvalent foam. BC powder. Carbon dioxide.

5.1.2 Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (phosphorus oxides, nitrous vapours, hydrofluoric acid, hydrogen chloride, carbon monoxide - carbon dioxide). Pressurised container: May burst if heated. May polymerize on exposure to temperature rise. On heating: release of toxic/combustible gases/vapours (hydrogen cyanide).

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistant risk of physical explosion. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective goggles. Head/neck protection. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. **Personal precautions, protective equipment and emergency procedures**
Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

6.1.1 **Protective equipment for non-emergency personnel**
See heading 8.2

6.1.2 **Protective equipment for emergency responders**
Gloves. Protective goggles. Head/neck protection. Protective clothing. Suitable protective clothing. See heading 8.2

6.2. **Environmental precautions**
Dam up the solid spill. Use appropriate containment to avoid environmental contamination.

6.3. **Methods and material for containment and cleaning up**
Allow product to solidify and remove it by mechanical means. Carefully collect the spill/leftovers. Clean (treat) contaminated surfaces with acetone. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. **Reference to other sections**
See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. **Precautions for safe handling**
Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately.

7.2. **Conditions for safe storage, including any incompatibilities**

7.2.1 **Safe storage requirements:**
Storage temperature: < 50 °C. Store in a cool area. Keep out of direct sunlight. Ventilation at floor level. Fireproof storeroom. Unauthorized persons are not admitted. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 **Keep away from:** Heat sources, ignition sources, (strong) acids, (strong) bases, amines.

7.2.3 **Suitable packaging material:** Aerosol.

7.2.4 **Non suitable packaging material:** No data available

7.3. **Specific end use(s)**
If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. **Control parameters**

8.1.1 **Occupational exposure**
a) Occupational exposure limit values
If limit values are applicable and available these will be listed below.

UK

Dimethyl ether	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	400 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	766 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	500 ppm
	Short time value (Workplace exposure limit (EH40/2005))	958 mg/m³
Isocyanates, all (as -NCO) Except methyl isocyanate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	0.02 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	0.07 mg/m³

b) National biological limit values
If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods If applicable and available it will be listed below.

Isocyanates	NIOSH	5521
Isocyanates	NIOSH	5522

8.1.3 Applicable limit values when using the substance or mixture as intended
If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers
tris(2-chloro-1-methylethyl) phosphate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.93 mg/kg bw/day	
	Acute systemic effects inhalation	0.93 mg/m³	
	Long-term systemic effects dermal	0.528 mg/kg bw/day	
	Acute systemic effects dermal	0.582 mg/m³	

DNEL/DMEL - General population
tris(2-chloro-1-methylethyl) phosphate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects dermal	0.264 mg/m³	
	Acute systemic effects inhalation	0.23 mg/m³	
	Acute systemic effects oral	0.33 mg/kg bw/day	
	Long-term systemic effects dermal	0.264 mg/kg bw/day	
	Long-term systemic effects inhalation	0.23 mg/kg bw/day	
	Long-term systemic effects oral	0.33 mg/m³	

PNEC
tris(2-chloro-1-methylethyl) phosphate

Compartments	Value	Remark
Fresh water	0.64 mg/l	
Marine water	0.064 mg/l	
Aqua (intermittent releases)	0.51 mg/l	
STP	7.84 mg/l	
Fresh water sediment	2.92 mg/kg sediment dw	
Marine water sediment	0.29 mg/kg sediment dw	
Soil	1.7 mg/kg soil dw	
Oral	11600 g/kg food	
Fresh water	0.42 mg/l	
Marine water	0.42 mg/l	
Fresh water sediment	2.96 mg/kg sediment dw	
Marine water sediment	2.96 mg/kg sediment dw	

Soil	1.33 mg/kg soil dw	

8.1.5 **Control banding**
If applicable and available it will be listed below.

8.2. **Exposure controls**
The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 **Appropriate engineering controls**
Use spark-/explosion proof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly.

8.2.2 **Individual protection measures, such as personal protective equipment**
Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection: Wear gas mask with filter type A if conc. in air > exposure limit.
b) Hand protection: Gloves. Materials Breakthrough time Thickness LDPE (Low Density Poly Ethylene) > 10 minutes 0.025 mm
c) Eye protection: Protective goggles.
d) Skin protection: Head/neck protection. Protective clothing.

8.2.3 **Environmental exposure controls:**
See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	**Aerosol**
Odour	Characteristic odour
Odour threshold	no data available
Colour	Variable in colour, depending on the composition
Particle size	Not applicable
Explosion limits	no data available
Flammability	Extremely flammable aerosol
Log Kow	Not applicable (mixture)
Dynamic viscosity	no data available
Kinematic viscosity	no data available
Melting point	no data available
Boiling point	no data available
Flash point	no data available
Evaporation rate	no data available
Relative vapour density	> 1
Vapour pressure	no data available
Solubility	water; insoluble
	organic solvents; soluble
Relative density	1.0; 20 °C
Decomposition temperature	no data available
Auto-ignition temperature	no data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. **Other information**
Absolute density 1040 kg/m³; 20 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. no data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

May polymerize with many compounds e.g.: (strong) bases and amines. Reacts violently with (some) acids/bases.

10.4. Conditions to avoid

Use spark-/explosion proof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

10.5. Incompatible materials

(strong) acids, (strong) bases, amines.

10.6. Hazardous decomposition products

On heating: release of toxic/combustible gases/vapours (hydrogen cyanide). On burning: release of toxic and corrosive gases/vapours (phosphorus oxides,
nitrous vapours, hydrofluoric acid, hydrogen chloride, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

HardieFoam

No (test)data on the mixture available

HardieFoam

tris(2-chloro-1-methylethyl) phosphate

Route of exposure	Parameter	Method	Value	Exposure	Time	Species	Value determination	Remark
OraL	LD50	EU Method B.1 tris	500 mg/kg bw - 2000 mg/kg bw			Rat (male)	Experimental value	
Dermal	LD50	OECD 402	402 > 2000 mg/kg bw			Rabbit (male/female)	Experimental value	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	> 5 mg/l air 4			Rat (male/female)	Weight of evidence	

polymethylene polyphenyl isocyanate

Route of exposure	Parameter	Method	Value	Exposure	Time	Species	Value determination	Remark
Oral	LD50		> 10000 mg/kg			Rat	Literature Study	
Dermal	LD50		> 5000 mg/kg			Rabbit	Literature study	
Inhalation (vapours)	LD50		10 mg/l - 20 mg/l	4 h		Rat	Literature study	
Inhalation			Category 4				Literature study	

Classification is based on the relevant ingredients

Conclusion

Harmful if inhaled.

Low acute toxicity by the dermal route

Low acute toxicity by the oral route
Corrosion/irritation

HardieFoam
No (test)data on the mixture available
tris(2-chloro-1-methylethyl) phosphate

Route of exposure	Result	Method	Exposure Time	Time Point	Specifies	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405	72 h	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	OECD 404	4 H		Rabbit	Experimental value	

polymethylene polyphenyl isocyanate

Route of exposure	Result	Method	Exposure Time	Time Point	Specifies	Value determination	Remark
Eye	irritating	Category 2				Literature study	
Skin	irritating	Category 2				Literature study	
Inhalation	Irritating	STOT SE cat.3				Literature study	

Classification is based on the relevant ingredients

Conclusion
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Specific target organ toxicity, single exposure: classified as irritant to respiratory organs
Respiratory or skin sensitization

HardieFoam
No (test)data on the mixture available

tris(2-chloro-1-methylethyl) phosphate

Route of exposure	Result	Method	Exposure Time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 429			Mouse	Experimental value	

polymethylene polyphenyl isocyanate

Route of exposure	Result	Method	Exposure Time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing; Category 1					Literature study	
Inhalation	Sensitizing; Category 1					Literature study	

Classification is based on the relevant ingredients

Conclusion
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Specific target organ toxicity

HardieFoam
HardieFoam
No (test)data on the mixture available

tris(2-chloro-1-methylethyl) phosphate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	LOAEL	Equivalent to OECD 408	800 ppm	Liver	Weight gain	13 weeks (daily)	Rat (male)	Experimental value
Oral	NOAEL	Equivalent to OECD 408	800 ppm		No effect	13 weeks (daily)	Rat (female)	Experimental value

polymethylene polyphenyl isocyanate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation			STOT RE cat.2					Literature study

Classification is based on the relevant ingredients

Conclusion

May cause damage to organs through prolonged or repeated exposure.
Low sub-chronic toxicity by the dermal route
Low sub-chronic toxicity by the oral route

Mutagenicity (in vitro)

HardieFoam

No (test)data on the mixture available

tris(2-chloro-1-methylethyl) phosphate

Result	Method	Test substrate	Effect	Value Determination
Negative		Chinese hamster lung fibroblasts (V79)	No effect	Weight of evidence
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Weight of evidence
Negative	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Weight of evidence

Mutagenicity (in vivo)

HardieFoam

No (test)data on the mixture available

tris(2-chloro-1-methylethyl) phosphate

Result	Method	Exposure time	Test substrate	Effect	Value Determination
Negative	Equivalent to OECD 475		Rat (male)		Weight of evidence

Classification is based on the relevant ingredients

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

HardieFoam
No (test)data on the mixture available

polymethylene polyphenyl isocyanate

Route of exposure	Method	Value	Exposure Time	Species	Effect	Organ	Value determination
Unknown		Category 2			Literature study		

Classification is based on the relevant ingredients

Conclusion
Suspected of causing cancer.

Reproductive toxicity

HardieFoam
No (test)data on the mixture available

tris(2-chloro-1-methylethyl) phosphate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	LOAEL (P)	OECD 416	99 mg/kg bw	> 10 weeks (daily)	Rat (female)	Body weight, organ weight, food consumption	Female reproductive organ	Experimental value
	NOAEL (P)	OECD 416	416 85 mg/kg bw	> 10 weeks (daily)	Rat (male)	No effect		Experimental value
	NOAEL	Equivalent to OECD 414	1000 mg/kg bw	70 day(s)	Rat (female)	No effect		Experimental value

Classification is based on the relevant ingredients

Conclusion
HardieFoam
Not classified for reprotoxic or developmental toxicity

Toxicity other effects

HardieFoam
No (test)data on the mixture available

Chronic effects from short and long-term exposure

HardieFoam
ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Feeling of weakness. Itching. Skin rash/inflammation. May stain the skin. Dry skin. Coughing. Possible
inflammation of the respiratory tract. Respiratory difficulties.

SECTION 12: Ecological information

12.1. Toxicity

HardieFoam
No (test)data on the mixture available

tris(2-chloro-1-methylethyl) phosphate

	Parameter	Method	Value	Duration	Species	Test Design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		56.2 mg/l	96 h	Brachydanio rerio	Static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	65 mg/l - 335 mg/l	48 h	Daphnia magna			Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	73 mg/l	96 h	Selenastrum capricornutum			Experimental value; Growth rate

polymethylene polyphenyl isocyanate

	Parameter	Method	Value	Duration	Species	Test Design	Fresh/salt water	Value determination
Acute toxicity other aquatic organisms	LC50		> 1000 mg/l	96 h				Literature study
Toxicity aquatic microorganisms	EC50	OECD 209	> 100 mg/l	48 h	Activated sludge			Literature study
Toxicity algae and other aquatic plants	EC50	OECD 201	73 mg/l	96 h	Selenastrum capricornutum			Experimental value; Growth rate

Judgement of the mixture is based on the relevant ingredients

Conclusion
Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

tris(2-chloro-1-methylethyl) phosphate
Biodegradation water

Method	Value	Duration	Value determination
OECD 301E: Modified OECD Screening Test	14 %	28 day(s	Experimental value
OECD 301C: Modified MITI Test (I)	0 %	28 day(s)	Experimental value

polymethylene polyphenyl isocyanate
Biodegradation water

Method	Value	Duration	Value determination
OECD 302C: Inherent Biodegradability: Modified MITI Test (II)	< 60 %		Experimental value

Conclusion
Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

HardieFoam
Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

tris(2-chloro-1-methylethyl) phosphate

BCF fishes

Parameter	Method	Value	Duration	Temperature	Species	Value determination
BCF		0.8 - 4.6	6 weeks		Cyprinus carpio	Experimental Value

Log Kow

Parameter	Method	Value	Temperature	Species	Value determination
		2.59			Experimental Value

HardieFoam
polymethylene polyphenyl isocyanate
BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		1		Pisces	Literature

Log Kow

Parameter	Remark	Value	Temperature	Value determination
	No data available			

Conclusion
Does not contain bioaccumulative component(s)

12.4. Mobility in soil
No (test)data on mobility of the components available

12.5. Results of PBT and vPvB assessment
Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

HardieFoam
Fluorinated greenhouse gases (Regulation (EU) No 517/2014)
Contains component(s) included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)
Ozone-depleting potential (ODP)
Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations
The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste
European Union
Hazardous waste according to Directive 2008/98/EC.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
08 05 01* (wastes not otherwise specified in 08: waste isocyanates).
16 05 04* (gases in pressure containers and discarded chemicals: gases in pressure containers (including halons) containing hazardous substances).
Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Specific treatment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste.
Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the
waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to
prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

European Union
Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	1950

14.2. UN proper shipping name

Proper shipping name	Aerosols

14.3. Transport hazard class(es)

Hazard identification number	
Class	2
Classification code	5F

14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

HardieFoam
Rail (RID)

14.1. UN number

UN number	1950

14.2. UN proper shipping name

Proper shipping name	Aerosols

14.3. Transport hazard class(es)

Hazard identification number	23
Class	2
Classification code	5F

14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	ombination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number

UN number	1950

14.2. UN proper shipping name

Proper shipping name	Aerosols

14.3. Transport hazard class(es)

Hazard identification number	
Class	2
Classification code	5F

14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number

UN number	1950

14.2. UN proper shipping name

Proper shipping name	Aerosols

14.3. Transport hazard class(es)

Class	2.1

14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	63
Special provisions	190
Special provisions	277
Special provisions	327
Special provisions	344
Special provisions	381
Special provisions	959
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	Not applicable

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Air (ICAO-TI/IATA-DGR)

14.1. UN number

UN number	1950

14.2. UN proper shipping name

Proper shipping name	Aerosols, flammable

14.3. Transport hazard class(es)

Class	2.1

14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	A145
Special provisions	A167
Special provisions	A802
Limited quantities	maximum net quantity per packaging 30 kg G liquids. A package shall not weigh more than 30 kg. (gross mass)

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

Voc content	Remark
21%	2.1

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· tris(2-chloro-1-methylethyl) phosphate · polymethylene polyphenyl isocyanate	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: ó ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, ó tricks and jokes, ó games for one or more participants, or any article intended to be used as such, even with ornamental aspects,2. Articles not complying with paragraph 1 shall not be placed on the market.3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: ó can be used as fuel in decorative oil lamps for supply to the general public, and, ó present an aspiration hazard and are labelled with R65 or H304,4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: ìKeep lamps filled with this liquid out of the reach of childrenî; and, by 1 December 2010, ìJust a sip of lamp oil ó or even sucking the wick of lamps ó may lead to life- threatening lung damageî; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: ìJust a sip of grill lighter may lead to life threatening lung damageî; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.6.

		No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

National legislation Belgium

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No data available

National legislation The Netherlands

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Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 06
Waterbezwaarlijkheid	A (3)

National legislation France

HardieFoam

No data available

National legislation Germany

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WGK 1	Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergef‰hrdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

polymethylene polyphenyl isocyanate

TA-Luft	5.2.5; I
TRGS900 - Risiko der Fruchtsch‰digung	pMDI (als MDI berechnet); Y; Risiko der Fruchtsch‰digung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht bef¸rchtet zu werden
Sensibilisierende Stoffe	pMDI (als MDI berechnet); Sa; Atemwegssensibilisierende Stoffe
TRGS905 - Krebserzeugend	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); 2
TRGS905 - Erbgutverandernd	Techn. "Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -
TRGS905 - Fruchtbarkeitsgefhrdend	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -
TRGS905 - Fruchtschdigend	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion);
Hautresorptive Stoffe	pMDI (als MDI berechnet); H; Hautresorptiv

National legislation United Kingdom

HardieFoam

No data available

polymethylene polyphenyl isocyanate

Skin sensitisation	Isocyanates, all (as -NCO) Except methyl isocyanate; Sen
Respiratory sensitisation	Isocyanates, all (as -NCO) Except methyl isocyanate; Sen

Other relevant data
HardieFoam
No data available

polymethylene polyphenyl isocyanate

IARC - classification	3; Polymethylene polyphenyl isocyanate

15.2. Chemical safety assessment
No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information
Full text of any H-statements referred to under headings 2 and 3:
H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
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.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.

(*) INTERNAL CLASSIFICATION BY BIG
CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL Derived Minimal Effect Level
DNEL Derived No Effect Level
EC50 Effect Concentration 50 %
ErC50 EC50 in terms of reduction of growth rate
LC50 Lethal Concentration 50 %
LD50 Lethal Dose 50 %
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
OECD Organisation for Economic Co-operation and Development
PBT Persistent, Bioaccumulative & Toxic
PNEC Predicted No Effect Concentration
STP Sludge Treatment Process
vPvB very Persistent & very Bioaccumulative

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Specific concentration limits CLP

polymethylene polyphenyl isocyanate	C ≥ 5 %	% Eye Irrit 2;H319	analogous to Annex VI
	C ≥ 5 %	Skin Irrit 2;H315	analogous to Annex VI
	C ≥ 0.1 %	Resp Sens 1;H334	analogous to Annex VI
	C ≥ 5 %	STOT SE 3;H335	analogous to Annex VI

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