

HH-66 Vinyl Cement

Safety Data Sheet

According to Regulation (EC) No. 453/2010

Revision date: 29/10/2014

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Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product Name : HH-66 Vinyl Cement
Synonyms : Thermoplastic Polyurethane Adhesive Blend/Compound

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial. For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company

RH Products Co., Inc.
308 Old High Street
Acton, MA USA 01720
Information Telephone Number: 1-978-897-8000

1.4. Emergency telephone number

Emergency number : 1-800-535-5053 INFOTRAC; 1-352-323-3500 INFOTRAC International

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225
Eye Irrit. 2 H319
Repr. 2 H361
STOT SE 3 H336
STOT RE 2 H373

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11
Xi; R36
Repr.Cat.3; R62
Repr.Cat.3; R63
R67
Xn; R48/20

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazardous ingredients :

Toluene, Acetone, Methyl ethyl ketone

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (CLP) :

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.

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P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, lighting, ventilating equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, protective clothing, protective gloves.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a poison center if you feel unwell.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂) to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P235+P405 - Keep cool. Store locked up.
P501 - Dispose of contents/container according to local, regional, national, and international regulations.

EUH phrases

: EUH066 - Repeated exposure may cause skin dryness or cracking

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Methyl ethyl ketone	(CAS No) 78-93-3 (EC no) 201-159-0 (EC index no) 606-002-00-3	44	F; R11 Xi; R36 R66 R67
Acetone	(CAS No) 67-64-1 (EC no) 200-662-2 (EC index no) 606-001-00-8	34	F; R11 Xi; R36 R66 R67
Toluene	(CAS No) 108-88-3 (EC no) 203-625-9 (EC index no) 601-021-00-3	7,9	F; R11 Xi; R38 Xn; R65 Xn; R48/20 Repr.Cat.3; R63 R67 R52/53
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Methyl ethyl ketone	(CAS No) 78-93-3 (EC no) 201-159-0 (EC index no) 606-002-00-3	44	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acetone	(CAS No) 67-64-1 (EC no) 200-662-2 (EC index no) 606-001-00-8	34	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Toluene	(CAS No) 108-88-3 (EC no) 203-625-9 (EC index no) 601-021-00-3	7,9	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Using proper respiratory protection, immediately move the exposed person to fresh air. Assure fresh air breathing. Call a physician if symptoms occur.
- First-aid measures after skin contact : Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries : Causes serious eye irritation. Vapours may cause drowsiness and dizziness.
- Symptoms/injuries after inhalation : High concentration of vapours may induce: headache, dizziness, drowsiness, nausea and vomiting.
- Symptoms/injuries after skin contact : Repeated exposure may cause skin dryness or cracking.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : Ingestion is likely to be harmful or have adverse effects.
- Chronic symptoms : May cause damage to organs through prolonged or repeated exposure. May cause damage to central nervous system, liver, and kidneys. Suspected of damaging fertility or the unborn child.

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

If exposed or concerned, get medical advice and attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).
- Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
- Reactivity : Reacts violently with oxidants causing fire and explosion hazard.

5.3. Advice for firefighters

- Precautionary measures fire : Exercise caution when fighting any chemical fire.
- Firefighting instructions : Use water spray or fog for cooling exposed containers. Do not get water inside containers. Do not apply water stream directly at source of leak. Fight fire from safe distance and protected location.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Refer to Section 9 for flammability properties.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use special care to avoid static electric charges. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Do not get in eyes, on skin, or on clothing. Do not breathe vapour or mist.

6.1.1. For non-emergency personnel

Protective equipment : Use appropriate personal protection equipment (PPE).
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area. Eliminate ignition sources. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material.
Methods for cleaning up : Clear up spills immediately and dispose of waste safely. Use only non-sparking tools.

6.4. Reference to other sections

See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.
Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep in fireproof place.
Incompatible products : Strong acids. Strong bases. Strong oxidizers.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Toluene (108-88-3)		
EU	IOELV TWA (mg/m ³)	192 mg/m ³
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (mg/m ³)	384 mg/m ³
EU	IOELV STEL (ppm)	100 ppm
Austria	MAK (mg/m ³)	190 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m ³)	380 mg/m ³
Austria	MAK Short time value (ppm)	100 ppm
Belgium	Limit value (mg/m ³)	77 mg/m ³
Belgium	Limit value (ppm)	20 ppm
Belgium	Short time value (mg/m ³)	384 mg/m ³
Belgium	Short time value (ppm)	100 ppm
Bulgaria	OEL TWA (mg/m ³)	192,0 mg/m ³
Bulgaria	OEL TWA (ppm)	50 ppm
Bulgaria	OEL STEL (mg/m ³)	384,0 mg/m ³
Bulgaria	OEL STEL (ppm)	100 ppm

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Toluene (108-88-3)		
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	192 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	50 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	384 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	100 ppm
Cyprus	OEL TWA (mg/m ³)	192 mg/m ³
Cyprus	OEL TWA (ppm)	50 ppm
Cyprus	OEL STEL (mg/m ³)	384 mg/m ³
Cyprus	OEL STEL (ppm)	100 ppm
France	VLE (mg/m ³)	384 mg/m ³ (restrictive limit)
France	VLE (ppm)	100 ppm (restrictive limit)
France	VME (mg/m ³)	76,8 mg/m ³ (restrictive limit)
France	VME (ppm)	20 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	190 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	50 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 (BGW)	600 µg/l (Medium: whole blood - Time: end of shift - Parameter: Toluene) 1,5 mg/l (Medium: urine - Time: end of several shifts - Parameter: o-Cresol (after hydrolysis; for long-term exposures)
Gibraltar	OEL TWA (mg/m ³)	192 mg/m ³
Gibraltar	OEL TWA (ppm)	50 ppm
Gibraltar	OEL STEL (mg/m ³)	384 mg/m ³
Gibraltar	OEL STEL (ppm)	100 ppm
Greece	OEL TWA (mg/m ³)	192 mg/m ³
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (mg/m ³)	384 mg/m ³
Greece	OEL STEL (ppm)	100 ppm
USA ACGIH	ACGIH TWA (ppm)	20 ppm
Italy	OEL TWA (mg/m ³)	192 mg/m ³
Italy	OEL TWA (ppm)	50 ppm
Latvia	OEL TWA (mg/m ³)	50 mg/m ³
Latvia	OEL TWA (ppm)	14 ppm
Spain	VLA-ED (mg/m ³)	192 mg/m ³ (indicative limit value; manufacturing, commercialization, and use restrictions under REACH)
Spain	VLA-ED (ppm)	50 ppm (indicative limit value; manufacturing, commercialization, and use restrictions under REACH)
Spain	VLA-EC (mg/m ³)	384 mg/m ³
Spain	VLA-EC (ppm)	100 ppm
Switzerland	VLE (mg/m ³)	760 mg/m ³

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Toluene (108-88-3)		
Switzerland	VLE (ppm)	200 ppm
Switzerland	VME (mg/m ³)	190 mg/m ³
Switzerland	VME (ppm)	50 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	150 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	384 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	191 mg/m ³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m ³)	384 mg/m ³
United Kingdom	WEL STEL (ppm)	100 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	200 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	94 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	25 ppm
Estonia	OEL TWA (mg/m ³)	192 mg/m ³
Estonia	OEL TWA (ppm)	50 ppm
Estonia	OEL STEL (mg/m ³)	384 mg/m ³
Estonia	OEL STEL (ppm)	100 ppm
Finland	HTP-arvo (8h) (mg/m ³)	81 mg/m ³
Finland	HTP-arvo (8h) (ppm)	25 ppm
Finland	HTP-arvo (15 min)	380 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	100 ppm
Hungary	AK-érték	190 mg/m ³
Hungary	CK-érték	380 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	192 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	50 ppm
Ireland	OEL (15 min ref) (mg/m ³)	384 mg/m ³
Ireland	OEL (15 min ref) (ppm)	100 ppm
Lithuania	IPRV (mg/m ³)	192 mg/m ³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m ³)	384 mg/m ³
Lithuania	TPRV (ppm)	100 ppm
Luxembourg	OEL TWA (mg/m ³)	192 mg/m ³
Luxembourg	OEL TWA (ppm)	50 ppm
Luxembourg	OEL STEL (mg/m ³)	384 mg/m ³
Luxembourg	OEL STEL (ppm)	100 ppm
Malta	OEL TWA (mg/m ³)	192 mg/m ³
Malta	OEL TWA (ppm)	50 ppm
Malta	OEL STEL (mg/m ³)	384 mg/m ³
Malta	OEL STEL (ppm)	100 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	94 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	25 ppm
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m ³)	141 mg/m ³
Norway	Gjennomsnittsverdier (Korttidsverdi) (ppm)	37,5 ppm
Poland	NDS (mg/m ³)	100 mg/m ³
Poland	NDSch (mg/m ³)	200 mg/m ³
Romania	OEL TWA (mg/m ³)	192 mg/m ³

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Toluene (108-88-3)		
Romania	OEL TWA (ppm)	50 ppm
Romania	OEL STEL (mg/m ³)	384 mg/m ³
Romania	OEL STEL (ppm)	100 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	192 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	NPHV (Hraničná) (mg/m ³)	384 mg/m ³
Slovenia	OEL TWA (mg/m ³)	192 mg/m ³
Slovenia	OEL TWA (ppm)	50 ppm
Slovenia	OEL STEL (mg/m ³)	384 mg/m ³
Slovenia	OEL STEL (ppm)	200 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	192 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	384 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	100 ppm
Portugal	OEL TWA (mg/m ³)	192 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	50 ppm (indicative limit value)
Portugal	OEL STEL (mg/m ³)	384 mg/m ³ (indicative limit value)
Portugal	OEL STEL (ppm)	100 ppm (indicative limit value)
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure indicative limit value

Acetone (67-64-1)		
EU	IOELV TWA (mg/m ³)	1210 mg/m ³
EU	IOELV TWA (ppm)	500 ppm
Austria	MAK (mg/m ³)	1200 mg/m ³
Austria	MAK (ppm)	500 ppm
Austria	MAK Short time value (mg/m ³)	4800 mg/m ³
Austria	MAK Short time value (ppm)	2000 ppm
Belgium	Limit value (mg/m ³)	1210 mg/m ³
Belgium	Limit value (ppm)	500 ppm
Belgium	Short time value (mg/m ³)	2420 mg/m ³
Belgium	Short time value (ppm)	1000 ppm
Bulgaria	OEL TWA (mg/m ³)	600 mg/m ³
Bulgaria	OEL STEL (mg/m ³)	1400 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	1210 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	500 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	3620 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	1500 ppm
Cyprus	OEL TWA (mg/m ³)	1210 mg/m ³
Cyprus	OEL TWA (ppm)	500 ppm
France	VLE (mg/m ³)	2420 mg/m ³ (restrictive limit)
France	VLE (ppm)	1000 ppm (restrictive limit)
France	VME (mg/m ³)	1210 mg/m ³ (restrictive limit)

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Acetone (67-64-1)		
France	VME (ppm)	500 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	1200 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	500 ppm
Germany	TRGS 903 (BGW)	80 mg/l (Medium: urine - Time: end of shift - Parameter: Acetone)
Gibraltar	OEL TWA (mg/m ³)	1210 mg/m ³
Gibraltar	OEL TWA (ppm)	500 ppm
Greece	OEL TWA (mg/m ³)	1780 mg/m ³
Greece	OEL STEL (mg/m ³)	3560 mg/m ³
USA ACGIH	ACGIH TWA (ppm)	500 ppm
USA ACGIH	ACGIH STEL (ppm)	750 ppm
Italy	OEL TWA (mg/m ³)	1210 mg/m ³
Italy	OEL TWA (ppm)	500 ppm
Latvia	OEL TWA (mg/m ³)	1210 mg/m ³
Latvia	OEL TWA (ppm)	500 ppm
Spain	VLA-ED (mg/m ³)	1210 mg/m ³ (indicative limit value)
Spain	VLA-ED (ppm)	500 ppm (indicative limit value)
Switzerland	VLE (mg/m ³)	2400 mg/m ³
Switzerland	VLE (ppm)	1000 ppm
Switzerland	VME (mg/m ³)	1200 mg/m ³
Switzerland	VME (ppm)	500 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	1210 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	2420 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	1210 mg/m ³
United Kingdom	WEL TWA (ppm)	500 ppm
United Kingdom	WEL STEL (mg/m ³)	3620 mg/m ³
United Kingdom	WEL STEL (ppm)	1500 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	800 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	600 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	250 ppm
Estonia	OEL TWA (mg/m ³)	1210 mg/m ³
Estonia	OEL TWA (ppm)	500 ppm
Finland	HTP-arvo (8h) (mg/m ³)	1200 mg/m ³
Finland	HTP-arvo (8h) (ppm)	500 ppm
Finland	HTP-arvo (15 min)	1500 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	630 ppm
Hungary	AK-érték	1210 mg/m ³
Hungary	CK-érték	2420 mg/m ³ (Substances with European indicative limits (96/94/EC, 2000/39/EC, 2006/15/EC, 2009/161/EU), which currently has no peak limit concentration. In these cases, Annex 3.1. should be used exercised)
Ireland	OEL (8 hours ref) (mg/m ³)	1210 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	500 ppm
Lithuania	IPRV (mg/m ³)	1210 mg/m ³
Lithuania	IPRV (ppm)	500 ppm

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Acetone (67-64-1)		
Lithuania	TPRV (mg/m ³)	2420 mg/m ³
Lithuania	TPRV (ppm)	1000 ppm
Luxembourg	OEL TWA (mg/m ³)	1210 mg/m ³
Luxembourg	OEL TWA (ppm)	500 ppm
Malta	OEL TWA (mg/m ³)	1210 mg/m ³
Malta	OEL TWA (ppm)	500 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	295 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	125 ppm
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m ³)	368,75 mg/m ³
Norway	Gjennomsnittsverdier (Korttidsverdi) (ppm)	156,25 ppm
Poland	NDS (mg/m ³)	600 mg/m ³
Poland	NDSch (mg/m ³)	1800 mg/m ³
Romania	OEL TWA (mg/m ³)	1210 mg/m ³
Romania	OEL TWA (ppm)	500 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	1210 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	500 ppm
Slovakia	NPHV (Hraničná) (mg/m ³)	2420 mg/m ³
Slovenia	OEL TWA (mg/m ³)	1210 mg/m ³
Slovenia	OEL TWA (ppm)	500 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	600 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	250 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	1200 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	500 ppm
Portugal	OEL TWA (mg/m ³)	1210 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	500 ppm (indicative limit value)
Portugal	OEL STEL (ppm)	750 ppm
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen

Methyl ethyl ketone (78-93-3)		
EU	IOELV TWA (mg/m ³)	600 mg/m ³
EU	IOELV TWA (ppm)	200 ppm
EU	IOELV STEL (mg/m ³)	900 mg/m ³
EU	IOELV STEL (ppm)	300 ppm
Austria	MAK (mg/m ³)	295 mg/m ³
Austria	MAK (ppm)	100 ppm
Austria	MAK Short time value (mg/m ³)	590 mg/m ³
Austria	MAK Short time value (ppm)	200 ppm
Belgium	Limit value (mg/m ³)	600 mg/m ³
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m ³)	900 mg/m ³
Belgium	Short time value (ppm)	300 ppm
Bulgaria	OEL TWA (mg/m ³)	590 mg/m ³
Bulgaria	OEL STEL (mg/m ³)	885 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	600 mg/m ³

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Methyl ethyl ketone (78-93-3)		
Croatia	GVI (granična vrijednost izloženosti) (ppm)	200 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	900 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	300 ppm
Cyprus	OEL TWA (mg/m ³)	600 mg/m ³
Cyprus	OEL TWA (ppm)	200 ppm
Cyprus	OEL STEL (mg/m ³)	900 mg/m ³
Cyprus	OEL STEL (ppm)	300 ppm
France	VLE (mg/m ³)	900 mg/m ³ (restrictive limit)
France	VLE (ppm)	300 ppm (restrictive limit)
France	VME (mg/m ³)	600 mg/m ³ (restrictive limit)
France	VME (ppm)	200 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	600 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	200 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 (BGW)	5 mg/l (Medium: urine - Time: end of shift - Parameter: 2-Butanone)
Gibraltar	OEL TWA (mg/m ³)	600 mg/m ³
Gibraltar	OEL TWA (ppm)	200 ppm
Gibraltar	OEL STEL (mg/m ³)	900 mg/m ³
Gibraltar	OEL STEL (ppm)	300 ppm
Greece	OEL TWA (mg/m ³)	600 mg/m ³
Greece	OEL TWA (ppm)	200 ppm
Greece	OEL STEL (mg/m ³)	900 mg/m ³
Greece	OEL STEL (ppm)	300 ppm
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	300 ppm
Italy	OEL TWA (mg/m ³)	600 mg/m ³
Italy	OEL TWA (ppm)	200 ppm
Italy	OEL STEL (mg/m ³)	900 mg/m ³
Italy	OEL STEL (ppm)	300 ppm
Latvia	OEL TWA (mg/m ³)	200 mg/m ³
Latvia	OEL TWA (ppm)	67 ppm
Spain	VLA-ED (mg/m ³)	600 mg/m ³ (indicative limit value)
Spain	VLA-ED (ppm)	200 ppm (indicative limit value)
Spain	VLA-EC (mg/m ³)	900 mg/m ³
Spain	VLA-EC (ppm)	300 ppm
Switzerland	VLE (mg/m ³)	590 mg/m ³
Switzerland	VLE (ppm)	200 ppm
Switzerland	VME (mg/m ³)	590 mg/m ³
Switzerland	VME (ppm)	200 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	590 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	900 mg/m ³

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Methyl ethyl ketone (78-93-3)		
United Kingdom	WEL TWA (mg/m ³)	600 mg/m ³
United Kingdom	WEL TWA (ppm)	200 ppm
United Kingdom	WEL STEL (mg/m ³)	899 mg/m ³
United Kingdom	WEL STEL (ppm)	300 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	600 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	145 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	50 ppm
Estonia	OEL TWA (mg/m ³)	600 mg/m ³
Estonia	OEL TWA (ppm)	200 ppm
Estonia	OEL STEL (mg/m ³)	900 mg/m ³
Estonia	OEL STEL (ppm)	300 ppm
Finland	HTP-arvo (15 min)	300 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	100 ppm
Hungary	AK-érték	600 mg/m ³
Hungary	CK-érték	900 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	600 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Ireland	OEL (15 min ref) (mg/m ³)	900 mg/m ³
Ireland	OEL (15 min ref) (ppm)	300 ppm
Lithuania	IPRV (mg/m ³)	600 mg/m ³
Lithuania	IPRV (ppm)	200 ppm
Lithuania	TPRV (mg/m ³)	900 mg/m ³
Lithuania	TPRV (ppm)	300 ppm
Luxembourg	OEL TWA (mg/m ³)	600 mg/m ³
Luxembourg	OEL TWA (ppm)	200 ppm
Luxembourg	OEL STEL (mg/m ³)	900 mg/m ³
Luxembourg	OEL STEL (ppm)	300 ppm
Malta	OEL TWA (mg/m ³)	600 mg/m ³
Malta	OEL TWA (ppm)	200 ppm
Malta	OEL STEL (mg/m ³)	900 mg/m ³
Malta	OEL STEL (ppm)	300 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	220 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	75 ppm
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m ³)	275 mg/m ³
Norway	Gjennomsnittsverdier (Korttidsverdi) (ppm)	112,5 ppm
Poland	NDS (mg/m ³)	450 mg/m ³
Poland	NDSch (mg/m ³)	900 mg/m ³
Romania	OEL TWA (mg/m ³)	600 mg/m ³ 200 mg/m ³ (regulated under Methyl ethyl ketone)
Romania	OEL TWA (ppm)	200 ppm 63 ppm (regulated under Methyl ethyl ketone)
Romania	OEL STEL (mg/m ³)	900 mg/m ³
Romania	OEL STEL (ppm)	300 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	600 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	200 ppm

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Methyl ethyl ketone (78-93-3)		
Slovakia	NPHV (Hraničná) (mg/m ³)	900 mg/m ³
Slovenia	OEL TWA (mg/m ³)	600 mg/m ³
Slovenia	OEL TWA (ppm)	200 ppm
Slovenia	OEL STEL (mg/m ³)	900 mg/m ³
Slovenia	OEL STEL (ppm)	300 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	150 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	300 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	100 ppm
Portugal	OEL TWA (mg/m ³)	600 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	200 ppm (indicative limit value)
Portugal	OEL STEL (mg/m ³)	900 mg/m ³ (indicative limit value)
Portugal	OEL STEL (ppm)	300 ppm (indicative limit value)

8.2. Exposure controls

Appropriate engineering controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Gas detectors should be used when flammable gases/vapours may be released. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated above. All electrical equipment should comply with the National Electric Code. Ensure all national/local regulations are observed.

Personal protective equipment

: Full protective flameproof clothing. Protective goggles. Gloves. Insufficient ventilation: wear respiratory protection.



Materials for protective clothing

: Wear fire/flammable resistant/retardant clothing.

Hand protection

: Wear chemically resistant protective gloves.

Eye protection

: Chemical goggles or safety glasses.

Skin and body protection

: Wear suitable protective clothing.

Respiratory protection

: Use an approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

Other information

: When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear
Odour	: Strong Aromatic Odor/sharp mint like fragrance
Odour threshold	: No data available
pH	: No data available
Evaporation rate	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 35 °C (95 °F)
Flash point	: -14 °C ASTM D-56 (6,80 °F)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: > 1 (heavier than air)

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Relative density	: 0,88 (water = 1)
Solubility	: Insoluble in water
Partition coefficient: n-octanol/water	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable
9.2. Other information	
VOC content	: 51,9 % (3.59 lbs/gal or 430 g/l)

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with oxidants causing fire and explosion hazard.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Ignition sources.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg
LD50 dermal rabbit	12000 mg/kg
Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg
LD50 dermal rabbit	15688 mg/kg
LC50 inhalation rat (mg/l)	44 g/m ³
Methyl ethyl ketone (78-93-3)	
LD50 oral rat	2054 mg/kg
LD50 dermal rat	> 10 ml/kg
LD50 dermal rabbit	5000 mg/kg
LC50 inhalation rat (ppm)	11700 ppm/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Toluene (108-88-3)	
IARC group	3

Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

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Toluene (108-88-3)	
LC50 fishes 1	15,22 - 19,05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	5,46 - 9,83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	12,6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	11,5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
NOEC chronic crustacea	0,74 mg/l (Ceriodaphnia dubia)

Acetone (67-64-1)	
LC50 fishes 1	4144,846 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	1679,66 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	6210 (6210 - 8120) mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	12600 (12600 - 12700) mg/l (Exposure time: 48 h - Species: Daphnia magna)

Methyl ethyl ketone (78-93-3)	
LC50 fishes 1	3130 (3130 - 3320) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	520 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Daphnia 2	5091 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

Acetone (67-64-1)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

Toluene (108-88-3)	
Log Pow	2,65

Acetone (67-64-1)	
BCF fish 1	0,69
Log Kow	-0,24

Methyl ethyl ketone (78-93-3)	
Log Pow	0,29

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Acetone (67-64-1)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of waste material in accordance with all local, regional, national, and international regulations.

Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1133

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ADHESIVES

Transport document description (ADR) : UN 1133 ADHESIVES, 3, II, (D/E)

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14.3. Transport hazard class(es)

Class (ADR) : 3

Hazard labels (ADR) : 3



14.4. Packing group

Packing group (ADR) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 33

Classification code (ADR) : F1

Orange plates :



Special provisions (ADR) 640D

Transport category (ADR) 2

Tunnel restriction code (ADR) : D/E

Limited quantities (ADR) 5L

Excepted quantities (ADR) : E2

EAC code : •3YE

14.6.2. Transport by sea

MFAG-No : 127;128

14.6.3. Air transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. 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	HH-66 Vinyl Cement
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	HH-66 Vinyl Cement
48. Toluene	Toluene

Contains no substance on the REACH candidate list

VOC content : 51,9 % (3.59 lbs/gal or 430 g/l)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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SECTION 16: Other information

Revision date : 29/10/2014
Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Full text of R-, H- and EUH-phrases:

Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child
H361d	Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects
R11	Highly flammable
R36	Irritating to eyes
R38	Irritating to skin
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R65	Harmful: may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
Xi	Irritant
Xn	Harmful

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