

**PVC ADHESIVE (Transparent) - Adhesive for rigid PVC pipes
(Transparent)
24-66**

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** PVC ADHESIVE (Transparent) - Adhesive for rigid PVC pipes (Transparent)
24-66
Cyclohexanone
- CAS: 108-94-1
EC: 203-631-1
Index: 606-010-00-7
REACH: 01-2119453616-35-XXXX
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses: Adhesive for rigid PVC
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:** EVOCHEM S.A.
Tzaverdella Place
133 41 PHILI , ATTICA - GREECE
Phone.: 0030 210 5590460 , 0030 210 5590155 -
Fax: 0030 210 6254737 , 0030 210 5590244
info@evochem.gr; vmergoupis@evochem.gr;
sales@evochem.gr
www.evochem.gr
- 1.4 Emergency telephone number:** National Poisoning Center 2107793777

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Directive 67/548/EC and Directive 1999/45/EC:

This product was classified in accordance with Directive 67/548/EC and Directive 1999/45/EC, adapting the requirements to Regulation (EC) n°1907/2006 (REACH regulation).

Carc. Cat 3: R40 - Limited evidence of a carcinogenic effect

F: R11 - Highly flammable

Xi: R36 - Irritating to eyes

Xn: R20 - Harmful by inhalation

R66 - Repeated exposure may cause skin dryness or cracking

CLP Regulation (EC) n° 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.

Acute Tox. 4: Acute inhalation toxicity, Category 4

Carc. 2: Carcinogenicity, Category 2

Eye Irrit. 2: Eye irritation, Category 2

Flam. Liq. 2: Flammable liquids, Category 2

STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3

2.2 Label elements:

Directive 67/548/EC and Directive 1999/45/EC:

In accordance with the legislation, the elements on the label are as follows:



Highly flammable



Harmful

R Phrases:

R11: Highly flammable

R20: Harmful by inhalation

R36: Irritating to eyes

R40: Limited evidence of a carcinogenic effect

R66: Repeated exposure may cause skin dryness or cracking

S Phrases:

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SECTION 2: HAZARDS IDENTIFICATION (continue)

S16: Keep away from sources of ignition - No smoking
S2: Keep out of the reach of children
S43: In case of fire, use polyvalent powder ABC
S46: If swallowed, seek medical advice immediately and show this container or label
S9: Keep container in a well-ventilated place

Supplementary information:

Non-applicable

Substances that contribute to the classification:

Cyclohexanone (CAS: 108-94-1); Tetrahydrofuran (CAS: 109-99-9)

CLP Regulation (EC) n° 1272/2008:

Danger



Hazard statements:

Acute Tox. 4: H332 - Harmful if inhaled
Carc. 2: H351 - Suspected of causing cancer
Eye Irrit. 2: H319 - Causes serious eye irritation
Flam. Liq. 2: H225 - Highly flammable liquid and vapour
STOT SE 3: H336 - May cause drowsiness or dizziness

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand
P102: Keep out of reach of children
P103: Read label before use
P280: Wear protective gloves/protective clothing/eye protection/face protection
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340: IF INHALED: Remove person to fresh air and keep 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
P501: Dispose of the contents/containers in accordance with the current legislation on waste treatment

Supplementary information:

EUH019: May form explosive peroxides
EUH066: Repeated exposure may cause skin dryness or cracking

Substances that contribute to the classification

Cyclohexanone (CAS: 108-94-1); 2-butanone (CAS: 78-93-3); Tetrahydrofuran (CAS: 109-99-9)

2.3 Other hazards:

Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical description: Mixture composed of resins in solvents

Components:



In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 108-94-1 EC: 203-631-1 Index: 606-010-00-7 REACH:01-2119453616-35-XXXX	Cyclohexanone ATP CLP00	24 - <50 %
	Directive 67/548/EC Xn: R20; R10	
	Regulation 1272/2008 Acute Tox. 4: H332; Flam. Liq. 3: H226 - Warning	
CAS: 78-93-3 EC: 201-159-0 Index: 606-002-00-3 REACH:01-2119457290-43-XXXX	2-butanone ATP CLP00	24 - <50 %
	Directive 67/548/EC F: R11; Xi: R36; R66; R67	
	Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336 - Danger	

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continue)

Identification	Chemical name/Classification	Concentration
CAS: 109-99-9 EC: 203-726-8 Index: 603-025-00-0 REACH:01-211944314-46-XXXX	Tetrahydrofuran ATP ATP03	
	Directive 67/548/EC Carc. Cat 3: R40; F: R11; Xi: R36/37; R19	 4,9 - <9,9 %
	Regulation 1272/2008 Carc. 2: H351; Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H335 - Danger	

To obtain more information on the risk of the substances consult sections 8, 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the MSDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with luke warm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the MSDS of the product.

By consumption:

In case of consumption, seek immediate medical assistance showing the MSDS of this product.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂). IT IS RECOMMENDED NOT to use tap water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit, ...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continue)

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertizing agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

6.2 Environmental precautions:

This product is not classified as dangerous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 94/9/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.:	5 °C
Maximum Temp.:	35 °C
Maximum time:	12 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the work environment

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)

Identification	Environmental limits		
	IOELV (8h)	IOELV (STEL)	Year
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	10 ppm	20 ppm	2014
2-butanone CAS: 78-93-3 EC: 201-159-0	200 ppm	300 ppm	2014
Tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	50 ppm	100 ppm	2014

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	4 mg/kg	Non-applicable	4 mg/kg	Non-applicable
	Inhalation	80 mg/m ³	80 mg/m ³	40 mg/m ³	40 mg/m ³
2-butanone CAS: 78-93-3 EC: 201-159-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1161 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	600 mg/m ³	Non-applicable
Tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	25 mg/kg	Non-applicable
	Inhalation	300 mg/m ³	300 mg/m ³	150 mg/m ³	150 mg/m ³

DNEL (Population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	Oral	1,5 mg/kg	Non-applicable	1,5 mg/kg	Non-applicable
	Dermal	1 mg/kg	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	20 mg/m ³	40 mg/m ³	10 mg/m ³	20 mg/m ³
2-butanone CAS: 78-93-3 EC: 201-159-0	Oral	Non-applicable	Non-applicable	31 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	412 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	106 mg/m ³	Non-applicable
Tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	Oral	Non-applicable	Non-applicable	15 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	15 mg/kg	Non-applicable
	Inhalation	150 mg/m ³	150 mg/m ³	62 mg/m ³	75 mg/m ³

PNEC:

Identification		PNEC	
		Systemic	Local
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	STP	10 mg/L	Fresh water
	Soil	0,0143 mg/kg	Marine water
	Intermittent	0,329 mg/L	Sediment (Fresh water)
	Oral	Non-applicable	Sediment (Marine water)
2-butanone CAS: 78-93-3 EC: 201-159-0	STP	709 mg/L	Fresh water
	Soil	22,5 mg/kg	Marine water
	Intermittent	55,8 mg/L	Sediment (Fresh water)
	Oral	1000 g/kg	Sediment (Marine water)
Tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	STP	4,6 mg/L	Fresh water
	Soil	2,13 mg/kg	Marine water
	Intermittent	21,6 mg/L	Sediment (Fresh water)
	Oral	67 g/kg	Sediment (Marine water)

8.2 Exposure controls:

A.- General security and hygiene measures in the work place

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)

In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the professional exposure limits. In case of using individual protection equipment they should have the "CE marking" in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory respiratory tract protection	Filter mask for gases and vapours	CE CAT III	EN 405:2001+A1:2009	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory hand protection	NON-disposable chemical protective gloves	CE CAT III	EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory face protection	Face mask	CE CAT II	EN 166:2001 EN 167:2001 EN 168:2001 EN 172:1994/A1:2000 EN 172:1994/A2:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Bodily protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties	CE CAT III	EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2001 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties	CE CAT III	EN 13287:2008 EN ISO 20345:2011 EN 13832-1:2006 EN ISO 20344:2011	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
Emergency shower	ANSI Z358-1 ISO 3864-1:2002	Eyewash stations	DIN 12 899 ISO 3864-1:2002

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatil organic compounds:

With regard to Directive 1999/13/EC, this product has the following characteristics:

V.O.C. (Supply): 76,4 % weight
V.O.C. density at 20 °C: 731,71 kg/m³ (731,71 g/L)

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Average carbon number: 4,93
Average molecular weight: 84,15 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C: Liquid
Appearance: Paste
Color: Colourless
Odor: Characteristic

Volatility:

Boiling point at atmospheric pressure: 101 °C
Vapour pressure at 20 °C: 6779 Pa
Vapour pressure at 50 °C: 24749 Pa (25 kPa)
Evaporation rate at 20 °C: Non-applicable *

Product description:

Density at 20 °C: 958 kg/m³
Relative density at 20 °C: 0,958
Dynamic viscosity at 20 °C: Non-applicable *
Kinematic viscosity at 20 °C: Non-applicable *
Kinematic viscosity at 40 °C: >20,5 cSt
Concentration: 960 g/L (active ingredient)
pH: Non-applicable *
Vapour density at 20 °C: Non-applicable *
Partition coefficient n-octanol/water 20 °C: Non-applicable *
Solubility in water at 20 °C: Non-applicable *
Solubility property: Non-applicable *
Decomposition temperature: Non-applicable *
Melting point/freezing point: Non-applicable *

Flammability:

Flash Point: 13 °C
Autoignition temperature: 321 °C
Lower flammability limit: Not available
Upper flammability limit: Not available

9.2 Other information:

Surface tension at 20 °C: Non-applicable *
Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity:**

No hazardous reactions are expected if the following technical instructions storage of chemicals. See section 7.

10.2 Chemical stability:

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SECTION 10: STABILITY AND REACTIVITY (continue)

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Combustive materials	Combustible materials	Others
Not applicable	Not applicable	Avoid direct impact	Avoid direct impact	Not applicable

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

No experimental information is available on the product itself in relation to the toxicological properties. When performing the danger classification on corrosive or irritant effects the recommendations included in section 3.2.5 of Annex VI of Directive 67/548/EC, in paragraphs b) and c) of section 3 of article 6 of Directive 1999/45/EC and in section 3.2.3.3.5. of Annex I of CLP Regulation were taken into account.

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A- Ingestion:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.

B- Inhalation:

Exposure in high concentrations can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion and in serious cases, loss of concentration.

C- Contact with the skin and the eyes:

Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.

E- Sensitizing effects:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensibilizing effects. For more information see section 3.

F- Specific target organ toxicity (STOT)-time exposure:

Exposure in high concentrations can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion and in serious cases, loss of concentration.

G- Specific target organ toxicity (STOT)-repeated exposure:

Repeated exposure may cause skin dryness or cracking

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

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SECTION 11: TOXICOLOGICAL INFORMATION (continue)

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	LD50 oral	2650 mg/kg	Rat
	LD50 dermal	3160 mg/kg	Rabbit
	LC50 inhalation	11 mg/L (4 h)	Rat
2-butanone CAS: 78-93-3 EC: 201-159-0	LD50 oral	4000 mg/kg	Rat
	LD50 dermal	6400 mg/kg	Rabbit
	LC50 inhalation	23,5 mg/L (4 h)	Rat
Tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	LD50 oral	3000 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the ecotoxicological properties of the product itself is not available

12.1 Toxicity:

Identification	Acute toxicity		Specie	Genus
	LC50	EC50		
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	LC50	527 mg/L (96 h)	Pimephales promelas	Fish
	EC50	800 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	370 mg/L (192 h)	Scenedesmus quadricauda	Alga
2-butanone CAS: 78-93-3 EC: 201-159-0	LC50	3220 mg/L (96 h)	Pimephales promelas	Fish
	EC50	5091 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	4300 mg/L (168 h)	Scenedesmus quadricauda	Alga
Tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	LC50	2160 mg/L (96 h)	Pimephales promelas	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	0.65	% Biodegradable	87 %
2-butanone CAS: 78-93-3 EC: 201-159-0	BOD5	2.03 g O2/g	Concentration	Non-applicable
	COD	2.31 g O2/g	Period	20 days
	BOD5/COD	0.88	% Biodegradable	89 %
Tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
	BCF	Pow Log
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	BCF	2
	Pow Log	0,81
	Potential	Low
2-butanone CAS: 78-93-3 EC: 201-159-0	BCF	3
	Pow Log	0,29
	Potential	Low
Tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	BCF	3
	Pow Log	0,46
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Koc	Conclusion	Henry	Dry soil
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	Koc	17	Henry	9,119E-1 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	34370 N/m (25 °C)	Moist soil	Yes

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SECTION 12: ECOLOGICAL INFORMATION (continue)

Identification	Absorption/desorption		Volatility	
2-butanone	Koc	30	Henry	5,765E+0 Pa·m ³ /mol
CAS: 78-93-3	Conclusion	Very High	Dry soil	Yes
EC: 201-159-0	Surface tension	23960 N/m (25 °C)	Moist soil	Yes
Tetrahydrofuran	Koc	23	Henry	7,194E+0 Pa·m ³ /mol
CAS: 109-99-9	Conclusion	Very High	Dry soil	Yes
EC: 203-726-8	Surface tension	24980 N/m (25 °C)	Moist soil	Yes

12.5 Results of PBT and vPvB assessment:

Non-applicable

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Directive 2008/98/EC)
08 04 09*	Waste adhesives and sealants containing organic solvents or other dangerous substances	Dangerous

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2000/532/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2000/532/EC: Commission Decision of 3 May 2000

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2013 and RID 2013:



- 14.1 UN number:** UN1133
- 14.2 UN proper shipping name:** ADHESIVES containing flammable liquid
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** II
- 14.5 Dangerous for the environment:** No
- 14.6 Special precautions for user**
Special regulations: 640D
Tunnel restriction code: D/E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 36-12:

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**PVC ADHESIVE (Transparent) - Adhesive for rigid PVC pipes
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SECTION 14: TRANSPORT INFORMATION (continue)



14.1 UN number:	UN1133
14.2 UN proper shipping name:	ADHESIVES containing flammable liquid
14.3 Transport hazard class(es):	3
Labels:	3
14.4 Packing group:	II
14.5 Dangerous for the environment:	No
14.6 Special precautions for user	
Special regulations:	944
EmS Codes:	F-E, S-D
Physico-Chemical properties:	see section 9
Limited quantities:	5 L
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2014:



14.1 UN number:	UN1133
14.2 UN proper shipping name:	ADHESIVES containing flammable liquid
14.3 Transport hazard class(es):	3
Labels:	3
14.4 Packing group:	II
14.5 Dangerous for the environment:	No
14.6 Special precautions for user	
Physico-Chemical properties:	see section 9
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Active substances for which a decision of non-inclusion onto Annex I (Regulation (EU) No 528/2012): Non-applicable

Regulation (EC) 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII, REACH):

Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:

- metallic glitter intended mainly for decoration,
- artificial snow and frost,
- "whoopee" cushions,
- silly string aerosols,
- imitation excrement,
- horns for parties,
- decorative flakes and foams,
- artificial cobwebs,
- stink bombs.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

- CONTINUED ON NEXT PAGE -

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SECTION 15: REGULATORY INFORMATION (continue)

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009, 2009 No. 716
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885
Control of Substances Hazardous to Health Regulations 2002 (as amended)
EH40/2005 Workplace exposure limits
The Waste Regulations 2011, 2011 No. 988

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EC) N° 453/2010)

Modifications related to the previous security card which concerns the ways of managing risks. :

Non-applicable

Text of R-phrases considered in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

Directive 67/548/EC and Directive 1999/45/EC:

R10: Flammable
R11: Highly flammable
R19: May form explosive peroxides
R20: Harmful by inhalation
R36: Irritating to eyes
R36/37: Irritating to eyes and respiratory system
R40: Limited evidence of a carcinogenic effect
R66: Repeated exposure may cause skin dryness or cracking
R67: Vapours may cause drowsiness and dizziness

CLP Regulation (EC) n° 1272/2008:

Acute Tox. 4: H332 - Harmful if inhaled
Carc. 2: H351 - Suspected of causing cancer
Eye Irrit. 2: H319 - Causes serious eye irritation
Flam. Liq. 2: H225 - Highly flammable liquid and vapour
Flam. Liq. 3: H226 - Flammable liquid and vapour
STOT SE 3: H335 - May cause respiratory irritation
STOT SE 3: H336 - May cause drowsiness or dizziness

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://esis.jrc.ec.europa.eu>
<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms:

- ADR: European agreement concerning the international carriage of dangerous goods by road
- IMDG: International maritime dangerous goods code
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organisation
- COD: Chemical Oxygen Demand
- BOD5: 5-day biochemical oxygen demand
- BCF: Bioconcentration factor
- LD50: Lethal Dose 50
- CL50: Lethal Concentration 50
- EC50: Effective concentration 50
- Log-POW: Octanol-water partition coefficient
- Koc: Partition coefficient of organic carbon

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Safety data sheet
According to 1907/2006/EC (REACH), 453/2010/EC

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The information contained in this security data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this security data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -