Revision Date:



## KX45, KX46

Telephone

Telefax

Version

2.0	19.02.2018		H51402		
SE	SECTION 1: Identification of the substance/mixture and of the company/undertaking				
1.1	<b>Product identifier</b> Trade name	:	KX45, KX46		
1.2	Relevant identified uses of the Use of the Substance/Mixture	1e s :	substance or mixture and uses advised against Curing chemical		
	Recommended restrictions on use	:	For use in industrial installations or professional treatment only.		
1.3	Details of the supplier of the	sat	fety data sheet		
	Company	:	Roberlo s.a. Ctra. Nacional II, Km. 706,5 17457 Riudellots de la Selva Spain		

SDS Number:

E-mail address of person responsible for the SDS	:	msds@roberlo.com	
1.4 Emergency telephone numb	er		

+34 972 478060 (8:00-12:45 / 14:15-17:30 h) ROBERLO (Spain) (GMT + 1:00)

: +34972478060

: +34972477394

### **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

### Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Chronic aquatic toxicity, Category 3	H412: Harmful to aquatic life with long lasting effects.

according to Regulation (EC) No. 1907/2006



## KX45, KX46

/ersion 2.0	Revision Date: 19.02.2018	SDS Number: H51402
2.2 Label elements		
Labelling (REG Hazard pictogra	BULATION (EC)	No 1272/2008)
Signal word	:	Warning
Hazard stateme	nts :	<ul> <li>H226 Flammable liquid and vapour.</li> <li>H317 May cause an allergic skin reaction.</li> <li>H332 Harmful if inhaled.</li> <li>H336 May cause drowsiness or dizziness.</li> <li>H412 Harmful to aquatic life with long lasting effects.</li> </ul>
Supplemental H Statements	lazard :	EUH066 Repeated exposure may cause skin dryness or cracking.
Precautionary s	tatements :	<ul> <li>Prevention:</li> <li>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</li> <li>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</li> <li>P260 Do not breathe vapours.</li> <li>P260 Do not breathe spray.</li> </ul>
		<b>Response:</b> P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
		<b>Disposal:</b> P501 Dispose of contents/ container to an approved waste disposal plant.
Hazardous com HDI oligomers, i		nust be listed on the label:

HDI oligomers, isocyanurate n-butyl acetate Solvent naphtha (petroleum), light arom. hexamethylene-di-isocyanate

### **Additional Labelling**

EUH204 Contains isocyanates. May produce an allergic reaction.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **SECTION 3: Composition/information on ingredients**

### 3.2 Mixtures

according to Regulation (EC) No. 1907/2006



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Chemical nature : Paint

### Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
HDI oligomers, isocyanurate	28182-81-2 500-060-2 01-2119485796-17	Acute Tox. 4; H332 Skin Sens. 1; H317 STOT SE 3; H335	>= 50 - < 70
n-butyl acetate	123-86-4 204-658-1 607-025-00-1 01-2119485493-29	Flam. Liq. 3; H226 STOT SE 3; H336	>= 20 - < 30
Solvent naphtha (petroleum), light arom.	64742-95-6 265-199-0 649-356-00-4	Flam. Liq. 3; H226 STOT SE 3; H335 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 2.5 - < 10
hexamethylene-di-isocyanate	822-06-0 212-485-8 615-011-00-1 01-2119457571-37	Acute Tox. 4; H302 Acute Tox. 1; H330 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335	>= 0.1 - < 0.5
Substances with a workplace exposure limit :			
2-methoxy-1-methylethyl acetate	108-65-6 203-603-9 607-195-00-7 01-2119475791-29	Flam. Liq. 3; H226	>= 10 - < 20

For explanation of abbreviations see section 16.

### **SECTION 4: First aid measures**

### 4.1 Description of first aid measures

General advice	:	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.
In case of skin contact	:	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses.

according to Regulation (EC) No. 1907/2006



Vers 2.0	sion	Revision Date: 19.02.2018	SDS Number: H51402
			Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
	If swallowed	:	<ul> <li>Keep respiratory tract clear.</li> <li>Do not give milk or alcoholic beverages.</li> <li>Never give anything by mouth to an unconscious person.</li> <li>If symptoms persist, call a physician.</li> </ul>
4.2	Most important	symptoms and	effects, both acute and delayed
	Symptoms	:	Inhalation may provoke the following symptoms: Headache Vertigo Fatigue Skin contact may provoke the following symptoms: Redness Ingestion may provoke the following symptoms: Abdominal pain Vomiting Diarrhoea
4.3	Indication of an	y immediate me	edical attention and special treatment needed
	Treatment	:	In case of ingestion, the stomach should be emptied by gastric lavage under qualified medical supervision.
SE	CTION 5: Firefi	ghting measu	ires
5.1	Extinguishing m	nedia	
••••		ishing media :	Alcohol-resistant foam Dry chemical
			Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
	Unsuitable extin media	guishing :	High volume water jet
5.2	Special hazards	arising from th	he substance or mixture
	Specific hazards firefighting	-	Do not allow run-off from fire fighting to enter drains or water courses.
	Hazardous com products	bustion :	No hazardous combustion products are known
5.3	Advice for firefig	ahters	
		-	In the event of fire, wear self-contained breathing apparatus.



Version 2.0	Revision Date: 19.02.2018	SDS Number: H51402
		In the event of fire, wear self-contained breathing apparatus.
Further info	rmation :	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

### **SECTION 6: Accidental release measures**

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Ensure adequate ventilation. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
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### 6.2 Environmental precautions

Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform
		respective authorities.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.
		Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### 6.4 Reference to other sections

For contact information in case of emergency, see section 1. For information on safe handling, see section 7. For exposure controls and personal protection measures, see section 8. For subsequent waste disposal, follow the recommendations in section 13.

### SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling	: Avoid formation of aerosol.
	Do not breathe vapours/dust.
	Avoid exposure - obtain special instructions before use.

according to Regulation (EC) No. 1907/2006



Versic 2.0	on Revision Data 19.02.2018	e:	SDS Number: H51402
			Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
	dvice on protection against re and explosion	:	Avoid formation of aerosol. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
			Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.
F	lygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
			When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
7.2 Co	onditions for safe storage, i	inc	luding any incompatibilities
	equirements for storage reas and containers	:	No smoking. Keep container tightly closed in a dry and well- ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
S	torage period	:	12 Months
	urther information on torage stability	:	No decomposition if stored and applied as directed.
7.3 Sp	pecific end use(s)		
S	pecific use(s)	:	For the use of this product do not exist particular recommendations apart from that already indicated.



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### **SECTION 8: Exposure controls/personal protection**

### 8.1 Control parameters

### **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
HDI oligomers, isocyanurate	28182-81-2	TWA	0.02 mg/m3 (as -NCO)	GB EH40
Further information	and respirator responsivenes airways have sometimes ev symptoms can who are expos- impossible to responsive. 5 distinguished people with pr include the dis asthmagens of exposure to sin prevented. Will standards of of substances the exposure be re to short-term management employees ex occupational a occupational a surveillance, substances an sensitisation to and skin conta Critical assess asthma' as up assessment he 'Sen' notation	y sensitisers) can in ss via an immunolog become hyper-respo- ren to tiny quantities, n range in severity fr sed to a sensitiser w identify in advance to 4 Substances that can from substances wh re-existing airway hy sease themselves. To r respiratory sensitis ubstances that can co here this is not possi- control to prevent wo at can cause occupa educed as low as is peak concentrations is being considered. posed or liable to be asthma and there sh health professional co Capable of causing re those which: - are by inhalation'; or 'R42 act' or - are listed in sments of the evider idated from time to til as shown to be a po	ational asthma (also known a duce a state of specific airwa ical, irritant or other mechan onsive, further exposure to the may cause respiratory symp om a runny nose to asthma. ill become hyper-responsive hose who are likely to becom an cause occupational asthma ich may trigger the symptom per-responsiveness, but whi- he latter substances are not sers., Wherever it is reasonal cause occupational asthma s ble, the primary aim is to appr rkers from becoming hyper-ra- tional asthma, COSHH require asonably practicable. Activity should receive particular atter should receive particular atter uses of a substance whould be appropriate consultant wer the degree of risk and le occupational asthma. The id assigned the risk phrase 'R 2/43: May cause sensitisation section C of HSE publication ince for agents implicated in o me, or any other substance whould cause of occupational as been assigned only to the	ay hyper- ism. Once the le substance, btoms. These Not all workers and it is he hyper- ha should be s of asthma in ch do not classified bly practicable, hould be bly adequate responsive. For irres that vities giving rise ention when risk priate for all ich may cause tion with an vel of entified 42: May cause in by inhalation in 'Asthmagen? ccupational which the risk I asthma., The
		STEL	0.07 mg/m3 (as -NCO)	GB EH40
Further information	and respirator responsivenes airways have sometimes ev symptoms can who are exposi- impossible to responsive. 5	y sensitisers) can in ss via an immunolog become hyper-respo en to tiny quantities, n range in severity fr sed to a sensitiser w identify in advance to 4 Substances that co	ational asthma (also known a duce a state of specific airwa ical, irritant or other mechan onsive, further exposure to th may cause respiratory symp om a runny nose to asthma. ill become hyper-responsive hose who are likely to becom an cause occupational asthm ich may trigger the symptom	ay hyper- ism. Once the ne substance, otoms. These Not all workers and it is ne hyper- na should be

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ersion 0		ision Date: )2.2018		SDS Number: H51402 tisting airway hyper-responsiveness, but which do not e themselves. The latter substances are not classified spiratory sensitisers., Wherever it is reasonably practicable ances that can cause occupational asthma should be this is not possible, the primary aim is to apply adequate of to prevent workers from becoming hyper-responsive. For an cause occupational asthma, COSHH requires that bed as low as is reasonably practicable. Activities giving ri concentrations should receive particular attention when r bing considered. Health surveillance is appropriate for all ed or liable to be exposed to a substance which may caus ma and there should be appropriate consultation with an th professional over the degree of risk and level of able of causing occupational asthma. The identified ose which: - are assigned the risk phrase 'R42: May cause halation'; or 'R42/43: May cause sensitisation by inhalation or - are listed in section C of HSE publication 'Asthmagen nts of the evidence for agents implicated in occupational ad from time to time, or any other substance which the risk hown to be a potential cause of occupational asthma., The			
		include the d asthmagens exposure to a prevented. W standards of substances t exposure be to short-term managemen employees e occupational occupational occupational surveillance. substances a sensitisation and skin con Critical asses asthma' as u assessment	isease themselve or respiratory ser substances that of /here this is not p control to preven hat can cause oc reduced as low a peak concentrat t is being conside xposed or liable t asthma and ther health profession , Capable of caus are those which: by inhalation'; or tact' or - are liste ssments of the ev pdated from time has shown to be				
		'Sen' notation in the list of WELs has been assigned only to those su which may cause occupational asthma.					
n-butyl acetate	cetate	123-86-4	TWA	150 ppm 724 mg/m3	GB EH40		
			STEL	200 ppm 966 mg/m3	GB EH40		
2-methox methyleth acetate		108-65-6	TWA	50 ppm 275 mg/m3	2000/39/EC		
	formation	Identifies the		nificant uptake through the	skin, Indicative		
			STEL	100 ppm 550 mg/m3	2000/39/EC		
Further in	formation	Identifies the		nificant uptake through the			
			TWA	50 ppm 274 mg/m3	GB EH40		
Further in	formation			<ul> <li>The assigned substances</li> <li>al absorption will lead to system</li> </ul>	stemic toxicity.		
			STEL	100 ppm 548 mg/m3	GB EH40		
Further in	formation			n. The assigned substances al absorption will lead to sys			
hexameth isocyanat		822-06-0	TWA	0.02 mg/m3 (as -NCO)	GB EH40		
Further in	formation	and respirato responsivent airways have sometimes e symptoms ca who are expo impossible to responsive.	bry sensitisers) ca ess via an immun become hyper-r ven to tiny quanti an range in sever osed to a sensitis b identify in advar 54 Substances th	ccupational asthma (also kr in induce a state of specific ological, irritant or other me esponsive, further exposure ties, may cause respiratory ity from a runny nose to ast er will become hyper-respondence those who are likely to be not can cause occupational s which may trigger the syn	airway hyper- echanism. Once the e to the substance, y symptoms. These thma. Not all worker posive and it is become hyper- asthma should be		

according to Regulation (EC) No. 1907/2006



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	include the disease th asthmagens or respir exposure to substance prevented. Where thi standards of control to substances that can do exposure be reduced to short-term peak co management is being employees exposed of occupational asthma occupational health p surveillance., Capabl substances are those sensitisation by inhala and skin contact' or Critical assessments asthma' as updated fi assessment has show 'Sen' notation in the li	ing airway hyper-responsiveness, but which do not hemselves. The latter substances are not classified ratory sensitisers., Wherever it is reasonably practicable, ces that can cause occupational asthma should be s is not possible, the primary aim is to apply adequate to prevent workers from becoming hyper-responsive. For cause occupational asthma, COSHH requires that I as low as is reasonably practicable. Activities giving rise oncentrations should receive particular attention when risi g considered. Health surveillance is appropriate for all or liable to be exposed to a substance which may cause and there should be appropriate consultation with an professional over the degree of risk and level of e of causing occupational asthma. The identified e which: - are assigned the risk phrase 'R42: May cause ation'; or 'R42/43: May cause sensitisation by inhalation - are listed in section C of HSE publication 'Asthmagen? of the evidence for agents implicated in occupational rom time to time, or any other substance which the risk wn to be a potential cause of occupational asthma., The ist of WELs has been assigned only to those substances
	which may cause occ	
Further inf	and respiratory sensitives responsiveness via a airways have become sometimes even to the symptoms can range who are exposed to a impossible to identify responsive. 54 Subsidistinguished from supeople with pre-existive include the disease the asthmagens or respire exposure to substance prevented. Where the substances that can be exposure be reduced to short-term peak comenagement is being employees exposed to a substances are those sensitisation by inhaliant and skin contact' or - Critical assessments asthma' as updated for the substance of the substance of the substances are those sensitisation by inhaliant as updated for the substance of the substances are those sensitisation by inhaliant as updated for the substance of the substances are those sensitisation by inhaliant as updated for the substance of the substances are those sensitisation by inhaliant as updated for the substance of the substance of the substance of the substance of the substances are those sensitisation by inhaliant as updated for the substance of the subs	cause occupational asthma (also known as asthmagens tisers) can induce a state of specific airway hyper- in immunological, irritant or other mechanism. Once the e hyper-responsive, further exposure to the substance, ny quantities, may cause respiratory symptoms. These in severity from a runny nose to asthma. Not all workers a sensitiser will become hyper-responsive and it is in advance those who are likely to become hyper- tances that can cause occupational asthma should be ubstances which may trigger the symptoms of asthma in ing airway hyper-responsiveness, but which do not hemselves. The latter substances are not classified ratory sensitisers., Wherever it is reasonably practicable, ces that can cause occupational asthma should be s is not possible, the primary aim is to apply adequate to prevent workers from becoming hyper-responsive. For cause occupational asthma, COSHH requires that a low as is reasonably practicable. Activities giving rise oncentrations should receive particular attention when risl g considered. Health surveillance is appropriate for all or liable to be exposed to a substance which may cause and there should be appropriate consultation with an professional over the degree of risk and level of e of causing occupational asthma. The identified e which: - are assigned the risk phrase 'R42: May cause ation'; or 'R42/43: May cause sensitisation by inhalation - are listed in section C of HSE publication 'Asthmagen? of the evidence for agents implicated in occupational rom time to time, or any other substance which the risk wn to be a potential cause of occupational asthma. The

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	IC and matation	, in the list of M	ITI a baa baan aasimnad anl	w to these substance
		ause occupation	'ELs has been assigned onl	y to those substance
	28182-81-2	TWA		GB EH40
HDI oligomers, isocyanurate	20102-01-2	IWA	0.02 mg/m3 (as -NCO)	GB EH40
Further information	Substances t	hat can cause	occupational asthma (also k	nown as asthmager
	and respirator responsivener airways have sometimes e symptoms ca who are expo- impossible to responsive. distinguished people with p include the di asthmagens exposure to s prevented. W standards of substances th exposure be to short-term management employees e occupational occupational surveillance., substances a sensitisation and skin cont Critical asses asthma' as u assessment	by inhalation'; of a shown to be when to the second to a sensitive become hyper ven to tiny quara nrange in severation of the second to a sensitive bed to a sensitiv	can induce a state of specifi inological, irritant or other m -responsive, further exposu natities, may cause respirator erity from a runny nose to as iser will become hyper-resp ance those who are likely to that can cause occupational es which may trigger the sy /ay hyper-responsiveness, b ves. The latter substances a ensitisers., Wherever it is re- can cause occupational as possible, the primary aim is ent workers from becoming b occupational asthma, COSH as is reasonably practicabl ations should receive particu- dered. Health surveillance is to be exposed to a substan- er should be appropriate co onal over the degree of risk using occupational asthma. - are assigned the risk phi or 'R42/43: May cause sens ted in section C of HSE pub- evidence for agents implicat the to time, or any other subs e a potential cause of occup (ELs has been assigned onl hal asthma.	ic airway hyper- nechanism. Once the re to the substance, ry symptoms. These sthma. Not all worke onsive and it is become hyper- al asthma should be mptoms of asthma i but which do not are not classified easonably practicabl thma should be s to apply adequate hyper-responsive. F IH requires that e. Activities giving ri- ular attention when r s appropriate for all nce which may caus onsultation with an and level of The identified rase 'R42: May caus itisation by inhalatio blication 'Asthmagen ed in occupational stance which the risk pational asthma., Th y to those substance
		STEL	0.07 mg/m3	GB EH40
Further information		hat can cause	(as -NCO) occupational asthma (also k can induce a state of specifi	nown as asthmager
	responsivene airways have sometimes e symptoms ca who are expo impossible to responsive. distinguished people with p include the d asthmagens exposure to s prevented. W	ess via an immu become hyper ven to tiny quar an range in seve osed to a sensit identify in adva 54 Substances from substance ore-existing airw isease themsel or respiratory s substances that /here this is not	anological, irritant or other m -responsive, further exposu- ntities, may cause respirator erity from a runny nose to as iser will become hyper-resp ance those who are likely to that can cause occupational es which may trigger the sy vay hyper-responsiveness, b ves. The latter substances a ensitisers., Wherever it is re- can cause occupational as possible, the primary aim is ent workers from becoming	nechanism. Once the re to the substance, ry symptoms. These sthma. Not all worke onsive and it is become hyper- al asthma should be mptoms of asthma in out which do not are not classified easonably practicabl thma should be s to apply adequate

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		exposure be to short-term managemen employees of occupational occupational surveillance substances sensitisation and skin con Critical asse asthma' as of assessment 'Sen' notation	e reduced as low in peak concentra at is being consid exposed or liable al asthma and the al health profession are those which: in by inhalation'; or intact' or - are listent essments of the e updated from time it has shown to be on in the list of WI	as is reasonably practicable tions should receive particu- ered. Health surveillance is to be exposed to a substan- re should be appropriate of nal over the degree of risk sing occupational asthma. - are assigned the risk phr r 'R42/43: May cause sensi- ed in section C of HSE pub- vidence for agents implicat to time, or any other subs a potential cause of occup ELs has been assigned onl	apational asthma, COSHH requires that is reasonably practicable. Activities giving r hs should receive particular attention when ed. Health surveillance is appropriate for all be exposed to a substance which may caus should be appropriate consultation with an I over the degree of risk and level of g occupational asthma. The identified are assigned the risk phrase 'R42: May cause (42/43: May cause sensitisation by inhalatic in section C of HSE publication 'Asthmager ence for agents implicated in occupational o time, or any other substance which the risl potential cause of occupational asthma., Th s has been assigned only to those substance
n-butyl acetate	etate	123-86-4	TWA	al asthma. 150 ppm 724 mg/m3	GB EH40
			STEL	200 ppm 966 mg/m3	GB EH40
2-methoxy methylethy acetate		108-65-6	TWA	50 ppm 275 mg/m3	2000/39/EC
Further inf	ormation	Identifies the	e possibility of sig	nificant uptake through the	skin, Indicative
			STEL	100 ppm 550 mg/m3	2000/39/EC
Further inf	ormation	Identifies the		nificant uptake through the	
			TWA	50 ppm 274 mg/m3	GB EH40
Further information			ncerns that derm	n. The assigned substance al absorption will lead to sy	stemic toxicity.
			STEL	100 ppm 548 mg/m3	GB EH40
Further inf	ormation			n. The assigned substance al absorption will lead to sy	

### **Biological occupational exposure limits**

Substance name	CAS-No.	Control parameters	Sampling time	Basis
HDI oligomers, isocyanurate	28182-81-2	urinary diamine: 1 µmol/mol creatinine (Urine)	Post task	GB EH40 BAT
hexamethylene-di- isocyanate	822-06-0	urinary diamine: 1 µmol/mol creatinine (Urine)	Post task	GB EH40 BAT

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
n-butyl acetate	Workers	Inhalation	Long-term systemic effects	480 mg/m3
2-methoxy-1-	Workers	Inhalation	Long-term systemic	275 mg/m3

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	methylethyl acetate				effects	
	Low boiling point naphtha - unspecified	Workers		Inhalation	Long-term systemi effects	c 608 mg/m3
	hexamethylene-di- isocyanate	Workers		Inhalation	Long-term local effects	0.035 mg/m3
8.2	Exposure controls				<b>I</b>	
	Personal protective e	quipment				
	Eye protection	:		ash bottle with p fitting safety go		
				ash bottle with p fitting safety go		
	Hand protection Material	:	Solver	ıt-resistant glov	es	
	Skin and body protection	on :	Choos		on according to the amo angerous substance at t	
	Choos			on according to the amo angerous substance at t		
	Respiratory protection	:		case of vapour red filter.	formation use a respirate	or with an
				case of vapour ved filter.	formation use a respirate	or with an

### **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	colourless
Odour	:	characteristic
рН	:	Not applicable
Melting point/range	:	not determined
Boiling point/boiling range	:	not determined
Flash point	:	30 °C Method: ISO 1523, closed cup Setaflash

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Upper explosion li flammability limit	imit / Upper :	not determined	
Lower explosion li flammability limit	imit / Lower :	not determined	
Vapour pressure	:	not determined	
Density	:	1.03 g/cm3 (20 °C) Method: ISO 2811-1	
Solubility(ies) Water solubility	<b>y</b> :	immiscible	
Viscosity Viscosity, dyna	amic :	28 mPa.s (20 °C) Method: ISO 2555	
9.2 Other information No data available	I		
No decomposition 10.2 Chemical stabilit No decomposition	<b>ty</b> n if stored and ap	oplied as directed.	
10.3 Possibility of haz Hazardous reaction			stored and applied as directed.
Tiazaruous reactio			stored and applied as directed.
		· · · · · · · · · · · · · · · · · · ·	xplosive mixture with air.
<b>10.4 Conditions to av</b> Conditions to avoi		Heat, flames and spa	
Conditions to avoi	id :		
	id : iterials		
Conditions to avoi	id : <b>iterials</b> :	Heat, flames and spa	
Conditions to avoi 10.5 Incompatible ma Materials to avoid 10.6 Hazardous deco	id : Iterials mposition prod	Heat, flames and spa No data available lucts	
Conditions to avoi <b>10.5 Incompatible ma</b> Materials to avoid <b>10.6 Hazardous deco</b> No data available <b>SECTION 11: Toxic</b>	id : Iterials mposition prod	Heat, flames and spa No data available lucts	
Conditions to avoi 10.5 Incompatible ma Materials to avoid 10.6 Hazardous deco No data available	id : Iterials mposition prod	Heat, flames and spa No data available lucts	

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Acute inha	alation toxicity		Acute toxicity estimate: 10 - 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
			Acute toxicity estimate: 19.4 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
<u>Compone</u>	ents:		
HDI oligo	mers, isocyanurate:		
Acute oral		:	LD50 Oral (Rat): > 2,000 mg/kg Method: OECD Test Guideline 401
Acute inha	alation toxicity	:	LC50 (Rat): > 0.543 mg/l Exposure time: 4 h Method: OECD Test Guideline 403
Acute den	mal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402
n-butyl ad	cetate:		
Acute oral	toxicity	:	LD50 Oral (Rat): 10,768 mg/kg Method: OECD Test Guideline 401
Acute inha	alation toxicity	:	LC50 (Rat): 23.4 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403
Acute der	mal toxicity	:	LD50 (Rabbit): 17,600 mg/kg Method: OECD Test Guideline 402
Solvent n	aphtha (petroleum),	lia	aht arom ·
Acute oral	-	:	LD50 Oral (Rat): 3,592 mg/kg Method: OECD Test Guideline 401
Acute inha	alation toxicity	:	LC50 (Rat): > 20 mg/l Exposure time: 4 h Test atmosphere: vapour
Acute den	mal toxicity	:	LD50 (Rabbit): 3,160 mg/kg Method: OECD Test Guideline 402
hexameth	ıylene-di-isocyanate	:	
Acute oral		:	LD50 Oral (Rat): 738 mg/kg Method: OECD Test Guideline 401
Acute inha	alation toxicity	:	LC50 (Rat): 0.31 mg/l

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			Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403
Acute dermal	toxicity	:	LD50 (Rabbit): 593 mg/kg Method: OECD Test Guideline 402
2-methoxy-1	-methylethyl a	ceta	te:
Acute oral tox			LD50 Oral (Rat): 8,532 mg/kg Method: OECD Test Guideline 401
Acute inhalati	ion toxicity	:	LC50 (Rat): 35.7 mg/l Exposure time: 4 h Test atmosphere: gas Method: OECD Test Guideline 403
Acute dermal	toxicity	:	LD50 (Rat): 5,000 mg/kg Method: OECD Test Guideline 402
Skin corrosio	on/irritation		
Serious eye	damage/eye irı	ritati	on
Respiratory o	or skin sensitis	satic	
Remarks: Bas Respiratory of Product:	or skin sensitis	satic	
Remarks: Bas Respiratory of Product:	<b>or skin sensitis</b> May cause sen:	satic	n
Remarks: Bas Respiratory of <u>Product:</u> Assessment:	or skin sensitis May cause sen: utagenicity	satic sitisa	n
Remarks: Bas Respiratory of <u>Product:</u> Assessment: Germ cell mu Germ cell mu	or skin sensitis May cause sen: utagenicity tagenicity-	satic sitisa	n ation by skin contact.
Remarks: Bas Respiratory of <u>Product:</u> Assessment: Germ cell mu Assessment	or skin sensitis May cause sen utagenicity tagenicity- city	satic sitisa	ation by skin contact. Based on available data, the classification criteria are not met.
Remarks: Bas Respiratory of <u>Product:</u> Assessment: Germ cell mu <u>Product:</u> Germ cell mu Assessment Carcinogenic <u>Product:</u> Carcinogenici	or skin sensitis May cause sen utagenicity tagenicity- city	satic sitisa	ation by skin contact. Based on available data, the classification criteria are not met.
Remarks: Bas Respiratory of Product: Assessment: Germ cell mu Assessment Carcinogenici Assessment	or skin sensitis May cause sens utagenicity tagenicity- city ity - e toxicity	satic sitisa :	n ation by skin contact.



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Assessment

#### STOT - single exposure

### Product:

Exposure routes: Inhalation Target Organs: Central nervous system Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

### STOT - repeated exposure

#### Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### Aspiration toxicity

#### Product:

Based on available data, the classification criteria are not met.

#### **Further information**

### Product:

Remarks: Based on available data, the classification criteria are not met.

### **SECTION 12: Ecological information**

#### 12.1 Toxicity

### Components:

#### HDI oligomers, isocyanurate:

Toxicity to algae	:	EC50 (Algae): 370 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

### n-butyl acetate:

Toxicity to fish	:	LC50 (Fish): 18 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): 32 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Algae): 675 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

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Solvent na	phtha (petroleum), li	ight arom.:
Toxicity to f	fish :	LC50 (Fish): 9.2 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to a aquatic invo	daphnia and other : ertebrates	EC50 (Daphnia (water flea)): 3.2 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to a	algae :	EC50 (Algae): 2.9 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
2-methoxy	-1-methylethyl aceta	te:
Toxicity to f	fish :	LC50 (Fish): 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to a aquatic inve	daphnia and other : ertebrates	EC50 (Daphnia (water flea)): 408 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to a	algae :	EC50 (Algae): 1,000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
<b>12.2 Persistend</b> No data av	<b>ce and degradability</b> ailable	
<b>12.3 Bioaccum</b> No data av	<b>ulative potential</b> ailable	
<b>12.4 Mobility in</b> No data av		
12.5 Results of	PBT and vPvB asse	ssment
<u>Product:</u> Assessmer	nt :	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher
12.6 Other advo	erse effects	
Product:		
Environme pathways	ntal fate and :	No data available
Additional e information		An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.



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### **SECTION 13: Disposal considerations**

13.1 Waste treatment methods		
Product	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Offer surplus and non-recyclable solutions to a licensed disposal company.
		The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.
		Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

### **SECTION 14: Transport information**

14.1 UN number		
IMDG	:	UN 1263
IATA (Cargo)	:	UN 1263
14.2 UN proper shipping name		
ADR	:	PAINT RELATED MATERIAL
IMDG	:	PAINT RELATED MATERIAL
IATA (Cargo)	:	Paint related material
14.3 Transport hazard class(es)		
ADR	:	3
IMDG	:	3
IATA (Cargo)	:	3
14.4 Packing group		
<b>ADR</b> Packing group Classification Code Hazard Identification Number	•	III F1 30

according to Regulation (EC) No. 1907/2006



## KX45, KX46

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Labels	:	3
<b>IMDG</b> Packing group Labels EmS Code	:	III 3 F-E, <u>S-E</u>
IATA (Cargo) Packing instruc aircraft) Packing instruc Packing group Labels	ction (LQ)	Y344 III
14.5 Environmenta	al hazards	
<b>ADR</b> Environmental	ly hazardous :	no
<b>IMDG</b> Marine polluta	nt :	no
<b>14.6 Special preca</b> Not applicable		

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

Not applicable for product as supplied.

### **SECTION 15: Regulatory information**

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

P5c	FLAMMABLE LIQUIDS	Quantity 1 5,000 t	Quantity 2 50,000 t
34	Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)	2,500 t	25,000 t

### Other regulations:

The product is classified and labelled in accordance with EC directives or respective national



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laws.

### 15.2 Chemical safety assessment

The supplier has not carried out evaluation of chemical safety.

### **SECTION 16: Other information**

#### Full text of H-Statements

H226 H302 H304 H315 H317 H319 H330 H332 H334		Flammable liquid and vapour. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Fatal if inhaled. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.		
H335	:	May cause respiratory irritation.		
H336	:	May cause drowsiness or dizziness.		
H411	:	Toxic to aquatic life with long lasting effects.		
Full text of other abbreviations				
Acute Tox.	:	Acute toxicity		
Aquatic Chronic	:	Chronic aquatic toxicity		
Asp. Tox.	:	Aspiration hazard		
5	:	Eye irritation		
Flam. Liq.	:	Flammable liquids		
Resp. Sens.	:	Respiratory sensitisation		
Skin Irrit.	:	Skin irritation		
Skin Sens.	:	Skin sensitisation		
STOT SE	:	Specific target organ toxicity - single exposure		
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values		
GB EH40		UK. EH40 WEL - Workplace Exposure Limits		
GB EH40 BAT	:	UK. Biological monitoring guidance values		
2000/39/EC / TWA		Limit Value - eight hours		
2000/39/EC / STEL	÷	Short term exposure limit		
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)		
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)		

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the



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Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID -Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Sources of key data used to : http://echa.europa.eu, http://eur-lex.europa.eu compile the Safety Data Sheet

Classification procedure:
6 Based on product data or assessment
2 Calculation method
7 Based on product data or assessment
6 Based on product data or assessment
2 Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

### GB / EN