according to Regulation (EC) No. 1907/2006



GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

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

1.1 Product identifier

Trade name : GTI 422-F

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

Use of the : Curing chemical

Substance/Mixture

Recommended restrictions

on use

For use in industrial installations or professional treatment

only.

1.3 Details of the supplier of the safety data sheet

Company : Roberlo s.a.

Ctra. Nacional II, Km. 706,5 17457 Riudellots de la Selva

Spain

Telephone : +34972478060

Telefax : +34972477394

E-mail address of person

responsible for the SDS

: msds@roberlo.com

1.4 Emergency telephone number

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

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

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :





Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard

Statements

EUH066

Repeated exposure may cause skin

dryness or cracking.

Precautionary statements

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open

flames and other ignition sources. No smoking.

P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.P260 Do not breathe vapours.P260 Do not breathe spray.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Hazardous components which must 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

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

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

GTI 422-F

Revision Date: SDS Number: Version 19.02.2018 H51402 2.0

Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

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:

Ingestion may provoke the following symptoms:

Abdominal pain Vomiting Diarrhoea

4.3 Indication of any immediate medical attention and special treatment needed

Treatment In case of ingestion, the stomach should be emptied by gastric

lavage under qualified medical supervision.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam

Dry chemical

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion

products

: No hazardous combustion products are known

5.3 Advice for firefighters

for firefighters

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

In the event of fire, wear self-contained breathing apparatus.

Further information : 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.

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

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 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.

Advice on protection against

fire 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.

Hygiene 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 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No smoking. Keep container tightly closed in a dry and wellventilated 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.

Storage period : 12 Months

Further information on storage stability

No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : For the use of this product do not exist particular

recommendations apart from that already indicated.

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form	Control parameters	Basis	
		of exposure)			
HDI oligomers,	28182-81-2	TWA	0.02 mg/m3	GB EH40	
isocyanurate		(as -NCO)			
Further information		Substances that can cause occupational asthma (also known as asthmagens			
		and respiratory sensitisers) can induce a state of specific airway hyper-			
		responsiveness via an immunological, irritant or other mechanism. Once the			
		airways have become hyper-responsive, further exposure to the substance,			
			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		
			per-responsiveness, but which		
			he latter substances are not		
			sers., Wherever it is reasonal		
			cause occupational asthma s		
			ble, the primary aim is to app		
			rkers from becoming hyper-r		
			ational asthma, COSHH requ		
			reasonably practicable. Activ		
			should receive particular atte		
		management is being considered. Health surveillance is appropriate for all			
	employees exposed or liable to be exposed to a substance which may cause				
	occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of				
	surveillance., Capable of causing occupational asthma. The identified				
	substances are those which: - are assigned the risk phrase 'R42: May cause				
	sensitisation by inhalation; or 'R42/43: May cause sensitisation by inhalation				
	and skin contact' or - are listed in section C of HSE publication 'Asthmagen?				
	Critical assessments of the evidence for agents implicated in occupational				
	asthma' as updated from time to time, or any other substance which the risk				
			itential cause of occupational		
			as been assigned only to the		
		use occupational as		ose substantes	
	William Illay ca	STEL	0.07 mg/m3	GB EH40	
		JILL	(as -NCO)	OD L1140	
Further information	Substances th	nat can cause occur	ational asthma (also known a	l se aethmagene	
i dittibi illibilliatibil			duce a state of specific airwa		
			ical, irritant or other mechani		
	airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These				
	symptoms can range in severity from a runny nose to asthma. Not all workers				
	who are exposed to a sensitiser will become hyper-responsive and it is				
	impossible to identify in advance those who are likely to become hyper-				
	responsive. 54 Substances that can cause occupational asthma should be				
	distinguished from substances which may trigger the symptoms of asthma in				
	alounguioneu	TOTAL GUDGICATIONS WIT	ion may ingger the symptom	o or aourina in	

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version 2.0		evision Date: SDS Number: .02.2018 H51402			
		include the disasthmagens of exposure to sprevented. Wistandards of control substances the exposure being to short-term management employees expocupational and control surveillance, substances are sensitisation to and skin control critical assessathmal as up assessment his exposure to short-term management employees expocupational and control surveillance, substances are sensitisation to and skin control skin control structure.	sease themselves. or respiratory sensitive ubstances that can here this is not possion troit to prevent what can cause occupied as low as is peak concentrations is being considered as the posed or liable to be asthma and there shealth professional Capable of causing re those which: - are toy inhalation; or 'R4 act' or - are listed in sments of the evide odated from time to has shown to be a possion respective.	yper-responsiveness, but whithe latter substances are not sers., Wherever it is reasonal cause occupational asthmatistic, the primary aim is to appropriate asthma, COSHH requisitional asthma is should receive particular attained as the appropriate consultation occupational asthma. The idea occupational asthma. The idea assigned the risk phrase 'Rayl'43: May cause sensitisation in section C of HSE publication in section C of HSE publication in the properties of the companion of the section of the companion of th	classified bly practicable, should be ply adequate responsive. For uires that vities giving rise ention when risk priate for all nich may cause ation with an evel of lentified t42: May cause in by inhalation in 'Asthmagen? occupational which the risk al asthma., The
n-butyl ace	etate	123-86-4	TWA	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 possibility of significant uptake through the skin, Indicative		Indicative	
			STEL	100 ppm 550 mg/m3	2000/39/EC
Further inf	ormation	Identifies the	possibility of signific	ant uptake through the skin,	Indicative
			TWA	50 ppm 274 mg/m3	GB EH40
Further inf	ormation			he assigned substances are osorption will lead to systemic	
			STEL	100 ppm 548 mg/m3	GB EH40
Further inf	ormation			he assigned substances are	
hexamethy	vlene-di	822-06-0	cerns that dermal al TWA	osorption will lead to systemic 0.02 mg/m3	GB EH40
isocyanate	è			(as -NCO)	
Further inf	ormation	Substances that can cause occupational asthma (also known as asthmagent and respiratory sensitisers) can induce a state of specific airway hyperresponsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all worker who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in		ay hyper- ism. Once the ne substance, ptoms. These Not all workers a and it is ne hyper- ma should be	

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers.. Wherever it is reasonably practicable. exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma.. The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.

STEL 0.07 mg/m3 GB EH40 (as -NCO)

Further information

Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyperresponsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyperresponsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma., The

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

		in the list of W	ELs has been assigned or al asthma.	
HDI oligomers, isocyanurate	28182-81-2	TWA	0.02 mg/m3 (as -NCO)	GB EH40
Further information	and respirator responsivener airways have sometimes ever symptoms can who are exporimpossible to responsive. Substances the exposure to substances the exposure be responsive to short-term management employees exposure to short-term management exposure to short	ry sensitisers) of services via an immulate become hyperen to tiny quanter range in several sed to a sensition identify in advanced to a sensition identify in advanced as upstances the sease themselver expiratory set ubstances that here this is not control to prevent can cause of educed as low peak concentration is being considered those which: by inhalation; of act, or - are list sensition of the educed from times as shown to be	ccupational asthma (also an induce a state of specinological, irritant or other responsive, further expositities, may cause respiratority from a runny nose to a ser will become hyper-responsive that can cause occupationes which may trigger the search cause occupational apossible, the primary aiment workers from becoming ccupational asthma, COS as is reasonably practical tions should receive partice and over the degree of rispinal over the d	fic airway hyper- mechanism. Once the ure to the substance, by symptoms. These asthma. Not all workers ponsive and it is to become hyper- lal asthma should be lymptoms of asthma in but which do not lare not classified leasonably practicable, sthma should be lis to apply adequate li hyper-responsive. For HH requires that lole. Activities giving rise cular attention when risk lis appropriate for all lance which may cause consultation with an land level of land l
Further information	Cubatanasa th	STEL	0.07 mg/m3 (as -NCO)	GB EH40
T GITTEL INTOITHAUUT	and respirator responsivener airways have sometimes everymptoms can who are exposible to responsive. Significating uished people with princlude the disasthmagens of exposure to seprevented. With air responsive to seprevented.	y sensitisers) of service an immulate become hyperen to tiny quantal range in seven sed to a sensition identify in advastances of the sease themselver respiratory setubstances that here this is not	accupational asthma (also an induce a state of speci- nological, irritant or other is responsive, further expositities, may cause respirate rity from a runny nose to a ser will become hyper-resume those who are likely that can cause occupation as which may trigger the seay hyper-responsiveness, res. The latter substances ensitisers., Wherever it is recan cause occupational apossible, the primary aim not workers from becoming	fic airway hyper- mechanism. Once the ure to the substance, ory symptoms. These asthma. Not all workers ponsive and it is to become hyper- hal asthma should be ymptoms of asthma in but which do not are not classified reasonably practicable, sthma should be is to apply adequate

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version	Revision Date:	SDS Number:
2.0	19.02.2018	H51402

exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma. 123-86-4 GB EH40 n-butyl acetate TWA 150 ppm 724 mg/m3 STEL GB EH40 200 ppm 966 mg/m3 TWA 2000/39/EC 2-methoxy-1-108-65-6 50 ppm 275 mg/m3 methylethyl acetate Further information Identifies the possibility of significant uptake through the skin, Indicative STEL 100 ppm 2000/39/EC 550 mg/m3 Further information Identifies the possibility of significant uptake through the skin, Indicative TWA GB EH40 50 ppm 274 mg/m3 Can be absorbed through skin. The assigned substances are those for which Further information there are concerns that dermal absorption will lead to systemic toxicity. GB EH40 **STEL** 100 ppm 548 mg/m3 Can be absorbed through skin. The assigned substances are those for which Further information there are concerns that dermal absorption will lead to systemic toxicity.

substances that can cause occupational asthma, COSHH requires that

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

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

methylethyl acetate			effects	
Low boiling point naphtha - unspecified	Workers	Inhalation	Long-term systemic effects	608 mg/m3
hexamethylene-di- isocyanate	Workers	Inhalation	Long-term local effects	0.035 mg/m3

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water

Tightly fitting safety goggles

Eye wash bottle with pure water Tightly fitting safety goggles

Hand protection

Material : Solvent-resistant gloves

Skin and body protection : Impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In the case of vapour formation use a respirator with an

approved filter.

In the case of vapour formation use a respirator with an

approved filter.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : colourless

Odour : characteristic

pH : Not applicable

Melting point/range : not determined

Boiling point/boiling range : not determined

Flash point : 30 °C

Method: ISO 1523, closed cup

Setaflash

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version **Revision Date:** SDS Number: 19.02.2018 H51402 2.0

Upper explosion limit / Upper : not determined

flammability limit

Lower explosion limit / Lower : not determined

flammability limit

Vapour pressure : not determined

Density : 1.03 g/cm3 (20 °C)

Method: ISO 2811-1

Solubility(ies)

Water solubility : immiscible

Viscosity

28 mPa.s (20 °C) Viscosity, dynamic

Method: ISO 2555

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions No decomposition if stored and applied as directed.

Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

Acute inhalation 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

Components:

HDI oligomers, isocyanurate:

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 0.543 mg/l

Exposure time: 4 h

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

n-butyl acetate:

Acute oral toxicity : LD50 Oral (Rat): 10,768 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 23.4 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 17,600 mg/kg

Method: OECD Test Guideline 402

Solvent naphtha (petroleum), light arom.:

Acute oral toxicity : LD50 Oral (Rat): 3,592 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 20 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 3,160 mg/kg

Method: OECD Test Guideline 402

hexamethylene-di-isocyanate:

Acute oral toxicity : LD50 Oral (Rat): 738 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 0.31 mg/l

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

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 acetate:

Acute oral toxicity : LD50 Oral (Rat): 8,532 mg/kg

Method: OECD Test Guideline 401

Acute inhalation 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 corrosion/irritation

Product:

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

Serious eye damage/eye irritation

Product:

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

Respiratory or skin sensitisation

Product:

Assessment: May cause sensitisation by skin contact.

Germ cell mutagenicity

Product:

Germ cell mutagenicity-

Assessment

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

Carcinogenicity

Product:

Carcinogenicity -

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

Assessment

Reproductive toxicity

Product:

Reproductive toxicity - : Based on available data, the classification criteria are not met.

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

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

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

Solvent naphtha (petroleum), light arom.:

Toxicity to fish : LC50 (Fish): 9.2 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia (water flea)): 3.2 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 2.9 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

2-methoxy-1-methylethyl acetate:

Toxicity to fish : LC50 (Fish): 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia (water flea)): 408 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 1,000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : 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 adverse effects

Product:

Environmental fate and

pathways

: No data available

Additional ecological

information

An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

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

ADR

Packing group : III
Classification Code : F1
Hazard Identification Number : 30

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

Labels : 3

IMDG

Packing group : III
Labels : 3
EmS Code : F-E, S-E

IATA (Cargo)

Packing instruction (cargo : 366

aircraft)

Packing instruction (LQ) : Y344
Packing group : III

Labels : Flammable Liquids

14.5 Environmental hazards

ADR

Environmentally hazardous : no

IMDG

34

Marine pollutant : no

14.6 Special precautions for user

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 Quantity 2 50,000 t 50,000 t

Petroleum products: (a)

2,500 t

25,000 t

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)

Other regulations:

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

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

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 : Flammable liquid and vapour.

H302 : Harmful if swallowed.

H304 : May be fatal if swallowed and enters airways.

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction. H319 : Causes serious eye irritation.

H330 : Fatal if inhaled. H332 : Harmful if inhaled.

H334 : May cause allergy or asthma symptoms or breathing

difficulties if inhaled.

H335 : May cause respiratory irritation. H336 : May cause drowsiness or dizziness.

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
Eye Irrit. : 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

according to Regulation (EC) No. 1907/2006

GTI 422-F

Version Revision Date: SDS Number: 2.0 19.02.2018 H51402

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 compile the Safety Data

Sources of key data used to : http://echa.europa.eu, http://eur-lex.europa.eu

Sheet

Classification of the mixture:

Classification procedure:

Flam. Liq. 3	H226	Based on product data or assessment
Acute Tox. 4	H332	Calculation method
Skin Sens. 1	H317	Based on product data or assessment
STOT SE 3	H336	Based on product data or assessment
Aquatic Chronic 3	H412	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