



GTI 467-F

Version 1.0

MSDS Number: H51583

Revision Date: 13.03.2015

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

1.1 Product identifier

Trade name : GTI 467-F

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

Use of the Sub-
stance/Mixture : Curing chemical

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.

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Specific target organ toxicity - single ex-
posure, Category 3, Central nervous
system H336: May cause drowsiness or dizziness.

Specific target organ toxicity - single ex-
posure, Category 3, Respiratory system H335: May cause respiratory irritation.

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting ef-
fects.

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Classification (67/548/EEC, 1999/45/EC)

Flammable	R10: Flammable.
	R66: Repeated exposure may cause skin dryness or cracking.
Harmful	R20: Harmful by inhalation.
Irritant	R37: Irritating to respiratory system.
	R43: May cause sensitisation by skin contact.

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.
H335 May cause respiratory irritation.
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/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
Response:
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

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HDI oligomers, isocyanurate

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

Chemical nature : Mixture
Paint

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
HDI oligomers, isocyanurate	28182-81-2 500-060-2 01- 2119485796-17	Xn-Xi; R20-R37- R43	Acute Tox.4; H332 Skin Sens.1; H317 STOT SE3; H335	>= 30 - < 50
n-butyl acetate	123-86-4 204-658-1 01- 2119485493-29	R10 R66 R67	Flam. Liq.3; H226 STOT SE3; H336	>= 20 - < 30
Solvent naphtha (petro- leum), light arom.	64742-95-6 265-199-0 01- 2119455851-35	Xn; R65 Xi; R37 N; R51/53 R10 R66 R67	Flam. Liq.3; H226 Asp. Tox.1; H304 STOT SE3; H335, H336 Aquatic Chronic2; H411	>= 2.5 - < 10
Substances with a workplace exposure limit :				
2-methoxy-1- methylethyl acetate	108-65-6 203-603-9 01- 2119475791-29	R10	Flam. Liq.3; H226	>= 20 - < 30

For explanation of abbreviations see section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

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 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

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.
Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.
If the product contaminates rivers and lakes or drains inform respective authorities.

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6.3 Methods and material for containment and cleaning up

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

7.2 Conditions for safe storage, including any incompatibilities

Storage period : 12 Months

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.

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/m ³ (as -NCO)	GB EH40
Further information	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitizers) 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, 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 people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitizers., 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			

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	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 'Asthmagens? 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.			
HDI oligomers, isocyanurate	28182-81-2	STEL	0.07 mg/m ³ (as -NCO)	GB EH40
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, 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 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 'Asthmagens? 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.			
n-butyl acetate	123-86-4	TWA	150 ppm 724 mg/m ³	GB EH40
n-butyl acetate	123-86-4	STEL	200 ppm 966 mg/m ³	GB EH40
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm 275 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
2-methoxy-1-	108-65-6	STEL	100 ppm	2000/39/EC

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methylethyl acetate			550 mg/m ³	
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm 274 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
2-methoxy-1-methylethyl acetate	108-65-6	STEL	100 ppm 548 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			

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

n-butyl acetate	: End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 480 mg/m ³
Low boiling point naphtha - unspecified	: End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 608 mg/m ³
2-methoxy-1-methylethyl acetate	: End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 275 mg/m ³

8.2 Exposure controls

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 applicable
Boiling point/boiling range	: 126.3 °C (7.6 hPa)
Flash point	: 32 °C Method: ISO 1523, closed cup Setaflash
Upper explosion limit	: No data available

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Lower explosion limit	: No data available
Vapour pressure	: 6 hPa (20 °C)
	42 hPa (50 °C)
Density	: 1.03 g/cm ³ (20 °C) Method: ISO 2811-1
Solubility(ies)	
Water solubility	: immiscible
Viscosity	
Viscosity, dynamic	: 30 mPa.s (20 °C) Method: ISO 2555
Viscosity, kinematic	: < 20 mm ² /s (40 °C)

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid

10.5 Incompatible materials

10.6 Hazardous decomposition products

Hazardous decomposition products : Isocyanates

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

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Acute inhalation toxicity : Acute toxicity estimate : > 20 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
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

Acute dermal toxicity : LD50 (Rabbit): 3,160 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
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): 5,000 mg/kg
Method: OECD Test Guideline 402

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Skin corrosion/irritation

Serious eye damage/eye irritation

Respiratory or skin sensitisation

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT - single exposure

STOT - repeated exposure

Aspiration toxicity

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

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

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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

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

SECTION 14: Transport information

14.1 UN number

ADR	: UN 1263
IMDG	: UN 1263
IATA	: UN 1263

14.2 UN proper shipping name

ADR : PAINT RELATED MATERIAL

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IMDG : PAINT RELATED MATERIAL

IATA : Paint related material

14.3 Transport hazard class(es)

ADR : 3

IMDG : 3

IATA : 3

14.4 Packing group

ADR

Packing group : III

Classification Code : F1

Hazard Identification Number : 30

Labels : 3

IMDG

Packing group : III

Labels : 3

EmS Code : F-E, S-E

IATA

Packing instruction (cargo aircraft) : 366

Packing instruction (LQ) : Y344

Packing group : III

Labels : Flammable Liquids

14.5 Environmental hazards

ADR

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 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 II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

		Quantity 1	Quantity 2
6	Flammable.	5,000 t	50,000 t
13	Petroleum products: (a) gasolines and naphthas,	2,500 t	25,000 t

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(b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams)

15.2 Chemical Safety Assessment

Not applicable

SECTION 16: Other information

Full text of R-Phrases

R10	Flammable.
R20	Harmful by inhalation.
R37	Irritating to respiratory system.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Full text of H-Statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Further information

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.