

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



Trade name : SYNTECH HAG ECO comp. A  
Revision date : 04.07.2017  
Print date : 21.07.2017

Version (Revision) : 2.0.0 (1.0.0)

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

#### 1.1 Product identifier

SYNTECH HAG ECO comp. A

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

Preparation for building and construction: Single-component, hydro-expanded, semi-rigid, solvent free, injectable polyurethane resin. Component A.

#### 1.3 Details of the supplier of the safety data sheet

##### Supplier (manufacturer/importer/only representative/downstream user/distributor)

AZICHEM Srl

**Street :** Via G. Gentile16/A

**Postal code/city :** 46044 Goito (MN)

**Telephone :** +390376604185/604365

**Telefax :** +39 0376 604398

**Information contact :** info@azichem.com

#### 1.4 Emergency telephone number

Centro Antiveleni di Milano +39 02 66101029 (CAV Ospedale Niguarda Ca' Granda -Milano) (24h)

Centro Antiveleni di Pavia +39 0382 24444 (CAV IRCCS Fondazione Maugeri - Pavia)

Centro Antiveleni di Bergamo +39 800 883300 (CAV Ospedali Riuniti - Bergamo)

Centro Antiveleni di Firenze +39 055 7947819 (CAV Ospedale Careggi - Firenze)

Centro Antiveleni di Roma +39 06 3054343 (CAV Policlinico Gemelli - Roma)

Centro Antiveleni di Roma +39 06 49978000 (CAV Policlinico Umberto I - Roma)

Centro Antiveleni di Napoli +39 081 7472870 (CAV Ospedale Cardarelli - Napoli)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Acute Tox. 4 ; H332 - Acute toxicity (inhalative) : Category 4 ; Harmful if inhaled.

Carc. 2 ; H351 - Carcinogenicity : Category 2 ; Suspected of causing cancer.

Eye Dam. 1 ; H318 - Serious eye damage/eye irritation : Category 1 ; Causes serious eye damage.

Skin Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.

Resp. Sens. 1 ; H334 - Sensitisation to the respiratory tract : Category 1 ; May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sens. 1 ; H317 - Skin sensitisation : Category 1 ; May cause an allergic skin reaction.

STOT SE 3 ; H335 - STOT-single exposure : Category 3 ; May cause respiratory irritation.

STOT RE 2 ; H373 - STOT-repeated exposure : Category 2 ; May cause damage to organs through prolonged or repeated exposure.

#### 2.2 Label elements

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

###### Hazard pictograms



Health hazard (GHS08) · Corrosion (GHS05) · Exclamation mark (GHS07)

###### Signal word

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Danger

### Hazard components for labelling

DIPHENYLMETHANE-4,4'-DIISOCYANATE, ISOMERES AND HOMOLOGUES ; CAS No. : 9016-87-9  
2-(ISOCYANATOSULFONYLMETHYL)BENZOIC ACID METHYL ESTER ; CAS No. : 83056-32-0  
4,4'-METHYLENEDIPHENYL DIISOCYANATE ; CAS No. : 101-68-8

### Hazard statements

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H318 Causes serious eye damage.  
H332 Harmful if inhaled.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H335 May cause respiratory irritation.

### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P284 Wear respiratory protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

### Special rules for supplemental label elements for certain mixtures

EUH204 Contains isocyanates. May produce an allergic reaction.

## 2.3 Other hazards

None

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

DIPHENYLMETHANE-4,4'-DIISOCYANATE, ISOMERES AND HOMOLOGUES ; CAS No. : 9016-87-9

Weight fraction :  $\geq 50 - < 100$  %  
Classification 1272/2008 [CLP] : Resp. Sens. 1 ; H334 STOT RE 2 ; H373 Acute Tox. 4 ; H332 Skin Irrit. 2 ; H315 Skin Sens. 1 ; H317 Eye Irrit. 2 ; H319 STOT SE 3 ; H335

ISOCYANIC ACID, POLYMETHYLENEDIPHENYLENE ESTER, POLYMER WITH ALPHA-HYDRO-OMEGA.-HYDROXYPOLYOXY (METHYL-1,2-ETHANEDYIL) ; CAS No. : 53862-89-8

Weight fraction :  $\geq 10 - < 25$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 Resp. Sens. 1 ; H334 Muta. 2 ; H341 STOT RE 2 ; H373 Eye Dam. 1 ; H318 Acute Tox. 4 ; H332

4,4'-METHYLENEDIPHENYL DIISOCYANATE ; EC No. : 202-966-0 ; CAS No. : 101-68-8

Weight fraction :  $< 2,5$  %  
Classification 1272/2008 [CLP] : Resp. Sens. 1 ; H334 Carc. 2 ; H351 STOT RE 2 ; H373 Acute Tox. 4 ; H332 Skin Irrit. 2 ; H315 Skin Sens. 1 ; H317 Eye Irrit. 2 ; H319 STOT SE 3 ; H335

#### Additional information

Full text of H- and EUH-statements: see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

When in doubt or if symptoms are observed, get medical advice.

#### Following inhalation

Remove victim out of the danger area. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

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### In case of skin contact

Wash immediately with: Water Remove contaminated, saturated clothing immediately. In case of skin irritation, consult a physician. In case of skin reactions, consult a physician.

### After eye contact

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

### After ingestion

Never give anything by mouth to an unconscious person or a person with cramps.

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

May cause eyes irritation, symptoms include redness, burning and pain. May produce an allergic reaction. Irritating to respiratory system. Irritating to skin.

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

None

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Extinguishing powder alcohol resistant foam Carbon dioxide (CO<sub>2</sub>) Water mist

### 5.2 Special hazards arising from the substance or mixture

None

### 5.3 Advice for firefighters

Remove persons to safety.

#### Special protective equipment for firefighters

Do not inhale explosion and combustion gases. Use appropriate respiratory protection.

## SECTION 6: Accidental release measures

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

Clear spills immediately. Wear a self-contained breathing apparatus and chemical protective clothing.

#### For non-emergency personnel

Remove persons to safety.

### 6.2 Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

#### For containment

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

#### For cleaning up

The contaminated area should be cleaned up immediately with: Water Retain contaminated washing water and dispose it.

### 6.4 Reference to other sections

Reference to other sections Safe handling: see section 7 Personal protection equipment: see section 8

## SECTION 7: Handling and storage

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### 7.1 Precautions for safe handling

#### Protective measures

##### Specific requirements or handling rules

Do not breathe dust. Do not breathe gas/fumes/vapour/spray. See section 8.

#### Advices on general occupational hygiene

Normal precautions taken when handling chemicals should be observed.

### 7.2 Conditions for safe storage, including any incompatibilities

Only use containers specifically approved for the substance/product.

#### Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place. Protect against UV-radiation/sunlight Humidity.

#### Hints on joint storage

Storage class : 12

Storage class (TRGS 510) : 12

#### Keep away from

Store at least 3 metres apart from: Chemicals/products that react together readily

#### Further information on storage conditions

Keep container tightly closed and in a well-ventilated place.

### 7.3 Specific end use(s)

None

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limit values

DIPHENYLMETHANE-4,4'-DIISOCYANATE, ISOMERES AND HOMOLOGUES ; CAS No. : 9016-87-9

Limit value type (country of origin) : TRGS 900 ( D )

Parameter : E: inhalable fraction

Limit value : 0,05 mg/m<sup>3</sup>

Peak limitation : 1/=2=(I)

Remark : H, Sa, Y

Version : 06.11.2015

4,4'-METHYLENEDIPHENYL DIISOCYANATE ; CAS No. : 101-68-8

Limit value type (country of origin) : TRGS 900 ( D )

Parameter : E: inhalable fraction

Limit value : 0,05 mg/m<sup>3</sup>

Peak limitation : 1/=2=(I)

Remark : H, Sa, Y

Version : 06.11.2015

#### Biological limit values

4,4'-METHYLENEDIPHENYL DIISOCYANATE ; CAS No. : 101-68-8

Limit value type (country of origin) : TRGS 903 ( D )

Parameter : 4,4'-Diaminodiphenylmethane / Urine (U) / End of exposure or end of shift

Limit value : 0,01 mg/g Kr

Version : 31.03.2004

#### DNEL/DMEL and PNEC values

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### DNEL/DMEL

## 8.2 Exposure controls

### Appropriate engineering controls

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

### Personal protection equipment



When using do not eat, drink, smoke, sniff.

### Eye/face protection

#### Suitable eye protection

Eye glasses with side protection

### Skin protection

#### Hand protection

Tested protective gloves must be worn

### Respiratory protection

Quarter-face mask (DIN EN 140) Half-face mask (DIN EN 140) Filtering Half-face mask (DIN EN 149)

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Safety relevant basis data

Aspect		liquid
Colour		brown
Odour		typical
Melting point/melting range :	( 1013 hPa )	No data available
Vapour density	( air = 1 )	Data not available
Initial boiling point and boiling range :	( 1013 hPa )	No data available
Decomposition temperature :		No data available
Self flammability		400 °C
Flash point :		No data available
Flammability (solid, gas)		Data not available
Lower explosion limit :		1,5 Vol-%
Upper explosion limit :		12,5 Vol-%
Explosive properties		Data not available
Vapour pressure	( 20 °C )	No data available
Density :	( 20 °C )	1,177 g/cm <sup>3</sup>
Water solubility :	( 20 °C )	No data available
pH :		No data available
Log Pow	( 20 °C )	not applicable
Viscosity :	( 20 °C )	115 mPa.s
Odour threshold		Data not available
Evaporation rate		Data not available
Maximum VOC content (EC) :		1999/13/EC
Oxidizing properties		Data not available

### 9.2 Other information

None

## SECTION 10: Stability and reactivity

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### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

See section 7. No additional measures necessary.

### 10.3 Possibility of hazardous reactions

Reacts violently with water.

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

Water. Amines

### 10.6 Hazardous decomposition products

No information available.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute effects

##### Acute oral toxicity

Parameter : LD50 ( DIPHENYLMETHANE-4,4'-DIISOCYANATE, ISOMERES AND HOMOLOGUES ; CAS No. : 9016-87-9 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 1500 mg/kg

##### Acute inhalation toxicity

Parameter : LD50 ( DIPHENYLMETHANE-4,4'-DIISOCYANATE, ISOMERES AND HOMOLOGUES ; CAS No. : 9016-87-9 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 490 mg/l

#### Irritant and corrosive effects

Irritating to eyes, respiratory system and skin.

#### Sensitisation

##### In case of skin contact

May cause sensitization by skin contact.

##### In case of inhalation

May cause sensitization by inhalation.

#### Repeated dose toxicity (subacute, subchronic, chronic)

There were no chronic effects or effects at low concentrations.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

The ingredients in this mixture do not meet the criteria for classification as CMR according to CLP.

## SECTION 12: Ecological information

Do not allow uncontrolled discharge of product into the environment.

### 12.1 Toxicity

#### Aquatic toxicity

##### Acute (short-term) algae toxicity

Parameter : EC50 ( DIPHENYLMETHANE-4,4'-DIISOCYANATE, ISOMERES AND HOMOLOGUES ; CAS No. : 9016-87-9 )

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Species : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Exposure time : 3 h  
Parameter : EC50 ( DIPHENYLMETHANE-4,4'-DIISOCYANATE, ISOMERES AND HOMOLOGUES ; CAS No. : 9016-87-9 )  
Species : Acute (short-term) daphnia toxicity  
Evaluation parameter : Daphnia magna  
Effective dose : > 1000 mg/l  
Exposure time : 24 h

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

No information available.

### 12.6 Other adverse effects

No information available.

### 12.7 Additional ecotoxicological information

None

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product/Packaging disposal

Dispose according to legislation.

## SECTION 14: Transport information

### 14.1 UN number

No dangerous good in sense of these transport regulations.

### 14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

### 14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

### 14.4 Packing group

No dangerous good in sense of these transport regulations.

### 14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

### 14.6 Special precautions for user

None

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

not applicable

## SECTION 15: Regulatory information

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

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### EU legislation

Regulation (EC) 1907/2006/CE (REACH). Regulation (EC) No 1272/2008 (CLP). Regulation (EU) 2015/830 requirements for the compilation of safety data sheets. Commission Regulation (EC) No 790/2009/CE (amending, for the purposes of its adaptation to technical and scientific progress (ATP), Regulation (EC) No 1272/2008). Commission Regulation (EU) No 286/2011 (amending, for the purposes of its adaptation to technical and scientific progress (ATP), Regulation (EC) No 1272/2008). Commission Regulation (EU) No 618/2012 (amending, for the purposes of its adaptation to technical and scientific progress (ATP), Regulation (EC) No 1272/2008). Commission Regulation (EU) No 487/2013 (amending, for the purposes of its adaptation to technical and scientific progress (ATP), Regulation (EC) No 1272/2008). Commission Regulation (EU) No 758/2013 (amending, for the purposes of its adaptation to technical and scientific progress (ATP), Regulation (EC) No 1272/2008). Commission Regulation (EU) No 944/2013 (amending, for the purposes of its adaptation to technical and scientific progress (ATP), Regulation (EC) No 1272/2008). Commission Regulation (EU) No 605/2014 (amending, for the purposes of its adaptation to technical and scientific progress (ATP), Regulation (EC) No 1272/2008). Commission Regulation (EU) No 1297/2015 (amending, for the purposes of its adaptation to technical and scientific progress (ATP), Regulation (EC) No 1272/2008).

### Other regulations (EU)

**Regulation (CE) 1907/2006: Substance of very high concern included in the SVHC Candidate List**  
None

### National regulations

Italy: Legislative Decree 81/2008 (Consolidated Law on protection of health and safety at work), as amended and Directive 2009/161/UE - chemical risk assessment in accordance with Title IX

### Technische Anleitung Luft (TA-Luft)

Weight fraction (Number 5.2.5. I) : 95 - 100 %

### Water hazard class (WGK)

Class : 1 (Slightly hazardous to water) Classification according to VwVwS

## 15.2 Chemical safety assessment

not applicable

## SECTION 16: Other information

### 16.1 Indication of changes

02. Classification of the substance or mixture · 02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] · 02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] - Hazard components for labelling · 03. Hazardous ingredients · 08. Occupational exposure limit values · 15. Technische Anleitung Luft (TA-Luft)

### 16.2 Abbreviations and acronyms

#### LEGENDA:

ADR:	Accord européen relative au transport international des marchandises dangereuses par route (accordo europeo relativo al trasporto internazionale delle merci pericolose su strada)
ASTM:	ASTM International, originariamente nota come American Society for Testing and Materials (ASTM)
EINECS:	European Inventory of Existing Commercial Chemical Substances (Registro Europeo delle Sostanze chimiche in Commercio)
EC(0/50/100):	Effective Concentration 0/50/100 (Concentrazione Effettiva Massima per 0/50/100% degli Individui)
LC(0/50/100):	Lethal Concentration 0/50/100 (Concentrazione Letale per 0/50/100% degli Individui)
IC50:	Inhibitor Concentration 50 (Concentrazione Inibente per il 50% degli Individui)
NOEL:	No Observed Effect Level (Dose massima senza effetti)
NOEC:	No Observed Effect Concentration (Concentrazione massima senza effetti)
LOEC:	Lowest Observed Effect Concentration (Concentrazione massima alla quale è possibile evidenziare un effetto)
DNEL:	Derived No Effect Level (Dose derivata di non effetto)
DMEL:	Derived Minimum Effect Level (Dose derivata di minimo effetto)
CLP:	Classification, Labelling and Packaging (Classificazione, Etichettatura e Imballaggio)
CSR:	Rapporto sulla Sicurezza Chimica (Chemical Safety Report)
LD(0/50/100):	Lethal Dose 0/50/100 (Dose Letale per 0/50/100% degli Individui)
IATA:	International Air Transport Association (Associazione Internazionale del Trasporto Aereo)
ICAO:	International Civil Aviation Organization (Organizzazione Internazionale dell'Aviazione Civile)



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Codice IMDG:	International Maritime Dangerous Goods code (Codice sul Regolamento del Trasporto Marittimo)
PBT:	Persistent, bioaccumulative and toxic (sostanze persistenti bioaccumulabili e tossiche)
RID:	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regolamento concernente il trasporto Internazionale ferroviario delle merci Pericolose)
STEL:	Short term exposure limit (limite di esposizione a breve termine)
TLV:	Threshold limit value (soglia di valore limite)
TWA:	Time Weighted Average (media ponderata nel tempo)
UE:	Unione Europea
vPvB:	Very persistent very bioaccumulative (sostanze molto persistenti e molto bioaccumulabili)
N.D.:	Non disponibile.
N.A.:	Non applicabile
VvWvS.:	Text of Administrative Regulation on the Classification of Substances hazardous to waters into Water Hazard Classes (Verwaltungsvorschrift wassergefährdende Stoffe – VvWvS)
PNEC:	Predicted No Effect Concentration
PNOS:	Particulates not Otherwise Specified
BOD:	Biochemical Oxygen Demand
COD:	Chemical Oxygen Demand
BCF:	BioConcentration Factor
TRGS :	Technische Regeln für Gefahrstoffe -Technical Rules for Hazardous Substances, defined by The Federal Institute for Occupational Safety and Health, Germany
LCLo:	Lethal Concentration Low (La minima concentrazione letale)
ThOD:	Theoretical Oxygen Demand

### 16.3 Key literature references and sources for data

None

### 16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

calculated.

### 16.5 Relevant H- and EUH-phrases (Number and full text)

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

### 16.6 Training advice

None

### 16.7 Additional information

None

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.