

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

### 1.1 Product identifier

· **Trade name:** F23 ISOCYANATE (A)

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

No further relevant information available.

· **Application of the substance / the mixture** Polyurethane resin

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

· **Manufacturer/Supplier:**

AXSON FRANCE

15 Rue de l'Equerre - F-95310 SAINT OUEN L'AUMONE

Tél. +33 (0)1 34 40 34 60

· **Further information obtainable from:** DPT HSE - +33 (0)1 34 40 34 60 - [safety@axson.com](mailto:safety@axson.com)

· **1.4 Emergency telephone number:** ORFILA : +33 (0)1 45 42 59 59

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Carc. 2 H351 Suspected of causing cancer.

STOT SE 3 H335 May cause respiratory irritation.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

### 2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

4,4'-Methylenediphenyl diisocyanate, oligomers

· **Hazard statements**

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

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- P284 [In case of inadequate ventilation] wear respiratory protection.  
 P280 Wear protective gloves/protective clothing/eye protection/face 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.  
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**  
 EUH204 Contains isocyanates. May produce an allergic reaction.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**  
 · **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 25686-28-6	4,4'-Methylenediphenyl diisocyanate, oligomers	50-100%
NLP: 500-040-3	Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	
Reg.nr.: 01-2119457013-49		

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**  
 · **General information:**  
 Immediately remove any clothing soiled by the product.  
 Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
 Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
 Where massive quantities of product have been inhaled in aerosol or concentrated vapour forms : remove patient from affected area. transfer to hospital (to an intensive care unit if necessary) by medically equipped ambulance. While awaiting the arrival of medical help, assist the patient's breathing if this is indicated. Clinical and radiographic monitoring will be required over a prolonged period, since delayed pulmonary oedema may occur.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.  
 · **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.  
 · **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.  
 · **4.3 Indication of any immediate medical attention and special treatment needed**  
 No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**  
 · **Suitable extinguishing agents:**  
 Carbon dioxide  
 Fire-extinguishing powder  
 Foam
- **For safety reasons unsuitable extinguishing agents:** Water

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**· 5.2 Special hazards arising from the substance or mixture***In case of fire, the following can be released:*

Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO)  
Hydrogen cyanide (HCN)  
(Traces)

**· 5.3 Advice for firefighters****· Protective equipment:** Wear self-contained respiratory protective device.**· Additional information***Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.***SECTION 6: Accidental release measures****· 6.1 Personal precautions, protective equipment and emergency procedures***Wear protective equipment. Keep unprotected persons away.***· 6.2 Environmental precautions:** Prevent seepage into sewage system, workpits and cellars.**· 6.3 Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).**After approximately one hour, transfer to suitable drum containers. Do not close these (likelihood of CO<sub>2</sub> production). Cover tops only.**Leave open to air in a supervised area for 7 to 14 days before transferring to an authorized dumping site.***· 6.4 Reference to other sections***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.***SECTION 7: Handling and storage****· 7.1 Precautions for safe handling***Ensure good ventilation/exhaustion at the workplace.**Inform personnel of risks associated with the product, the precautions to be taken and procedures to follow where an accident occurs.**Avoid exposure to the material of persons having suffered from chronic respiratory affections (especially asthmatic and bronchitic persons) and those having an isocyanate allergy.***· Information about fire - and explosion protection:** Protect from heat.**· 7.2 Conditions for safe storage, including any incompatibilities****· Storage:****· Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.**· Information about storage in one common storage facility:** Store away from foodstuffs.**· Further information about storage conditions:***Keep receptacle tightly sealed.**Protect from humidity and water.***· 7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****· Additional information about design of technical facilities:** No further data; see item 7.

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· **8.1 Control parameters**· **Ingredients with limit values that require monitoring at the workplace:****101-68-8 diphenylmethane-4,4'-di-isocyanate**

MEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
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· **Additional information:** The lists valid during the making were used as basis.· **8.2 Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.

Short term filter device:



Filter A/P2

· **Protection of hands:**

Protective gloves

· **Material of gloves**

Neoprene gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses

Tightly sealed goggles

· **Body protection:** Protective work clothing**SECTION 9: Physical and chemical properties**· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:****Form:**

Fluid

**Colour:**

Amber coloured

· **Odour:**

Characteristic

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- **pH-value at 20 °C:** NA
- **Change in condition**
  - Melting point/freezing point:** NA
  - Initial boiling point and boiling range:** NA
- **Flash point:** > 200 °C (P. Martens)
- **Ignition temperature:** >500 °C (DIN 51 794)
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product does not present an explosion hazard.
- **Density at 20 °C:** 1.22 g/cm<sup>3</sup> (ISO 1675:1985)
- **Solubility in / Miscibility with water:** Insoluble.
- **organic solvents:** Soluble in many organic solvents.
- **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
Violent reactions with -NHx, -OH and -SH- groups.  
In the presence of water or humidity gas is produced (CO<sub>2</sub>) and/or uncontrolled polymerization, possibly leading to internal pressure rises and consequent risk of container breach.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
Harmful if inhaled.

· **LD/LC50 values relevant for classification:**

**25686-28-6 4,4'-Methylenediphenyl diisocyanate, oligomers**

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>9400 mg/kg (rabbit)
Inhalative	LC50/4 h	0.49 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.

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- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**  
*Tumors of the lung were observed on animals of laboratory exposed to the MDI in the form of respirable aerosol*
- **Germ cell mutagenicity** *Based on available data, the classification criteria are not met.*
- **Carcinogenicity**  
*Suspected of causing cancer.*
- **Reproductive toxicity** *Based on available data, the classification criteria are not met.*
- **STOT-single exposure**  
*May cause respiratory irritation.*
- **STOT-repeated exposure**  
*May cause damage to organs through prolonged or repeated exposure.*
- **Aspiration hazard** *Based on available data, the classification criteria are not met.*

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity:

**25686-28-6 4,4'-Methylenediphenyl diisocyanate, oligomers**

EC50 (24h) > 1000 mg / l (daphnia)

EC50 (3h) > 100 mg / l (bacteria)

LC 50 (96h) > 1000 mg / l (fish)

### 12.2 Persistence and degradability

*No further relevant information available.*

#### Other information:

*This product is not miscible in water. It acts on water, producing CO<sub>2</sub> and polyurea (a solid, non-fusible and insoluble compound) which is, to the best of our knowledge, inert and non-biodegradable. This reaction is promoted by the presence of surfactants such as liquide soap, or water-soluble solvents. Do not dispose of this product or the neutralization products in sewers, rivers or streams.*

### 12.3 Bioaccumulative potential

*No further relevant information available.*

### 12.4 Mobility in soil

*No further relevant information available.*

### 12.5 Results of PBT and vPvB assessment

· **PBT:** *Not applicable.*

· **vPvB:** *Not applicable.*

### 12.6 Other adverse effects

*No further relevant information available.*

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

*Must not be disposed together with household garbage. Do not allow product to reach sewage system.*

*Dispose of the product by burning in a suitable incinerator or bury in an approved landfill following all applicable local and/or national regulations.*

#### European waste catalogue

08 05 01 waste isocyanates

#### Uncleaned packaging:

#### Recommendation:

*Empty containers may not be disposed of unless any remaining material adhering to the internal walls has been removed.*

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Disposal must be made according to official regulations.

### SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** Void
- **14.2 UN proper shipping name**
- **ADR, IMDG, IATA** Void
- **14.3 Transport hazard class(es)**
- **ADR, IMDG, IATA**
- **Class** Void
- **14.4 Packing group**
- **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:** Not applicable.
- **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.
- **Transport/Additional information:** Not dangerous according to the above specifications.
- **UN "Model Regulation":** Void

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations:**
- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- 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.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- **Training hints**
- Protective gloves must be worn, during the manipulation of freshly prepared polyurethane, to avoid any contact with possible trace of residual products which could represent a danger through skin contact.
- **Abbreviations and acronyms:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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*IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 4: Acute toxicity – Category 4**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Resp. Sens. 1: Respiratory sensitisation – Category 1**Skin Sens. 1: Skin sensitisation – Category 1**Carc. 2: Carcinogenicity – Category 2**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2***· \* Data compared to the previous version altered.**

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