

## Safety data sheet

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Chemetall (now part of BASF Group) Safety data sheet  
Date / Revised: 12.12.2018  
Product: **GARDOBOND X4707E-12**

Version: 1.0

(30720710/SDU\_GEN\_NZ/EN)

Date of print 18.01.2019

### 1. Substance/preparation and manufacturer/supplier identification

#### **GARDOBOND X4707E-12**

Manufacturer/supplier:

Chemetall (New Zealand) Ltd  
664 Rosebank Road Avondale,  
Auckland 1026  
NEW ZEALAND  
Tel: 008 837 464, +64 9 820 3888  
Fax: +64 9 820 3979  
Email: nzadmin@basf.com

Emergency information:

Telephone: +64 9 820 3888

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### SECTION 2. HAZARDS IDENTIFICATION

**GHS Classification**

Acute toxicity (Oral) : Category 4

Acute toxicity (Dermal) : Category 4

Skin corrosion/irritation : Category 2

Serious eye damage/eye  
irritation : Category 1

**GHS label elements**

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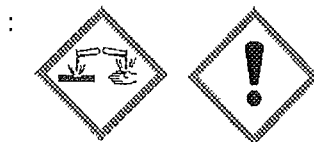
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Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 + H312 Harmful if swallowed or in contact with skin  
H314 Causes severe skin burns and eye damage.

Precautionary statements

: **Prevention:**

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**In use hazards**

An in-use solution of less than 15% is not classified as hazardous according to GHS criteria.

An in-use solution of 15 - 50% has the signal word WARNING according to GHS criteria.

**Other hazards which do not result in classification**

The information required is contained in this Material Safety Data Sheet.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture

: Mixture

**Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
Ammonium hydrogendifluoride	1341-49-7	< 10
Hexafluorotitanic acid	17439-11-1	< 10

**SECTION 4. FIRST AID MEASURES**

General advice

: First Aid responders should pay attention to self-protection and

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	use the recommended protective clothing Move out of dangerous area. Take off contaminated clothing and shoes immediately.
Inhalation	: Move to fresh air. If symptoms persist, call a physician.
Skin contact	: Wash off immediately with plenty of water for at least 15 minutes. Call a physician immediately. First treatment with calcium gluconate paste.
Eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
Ingestion	: Rinse mouth with water. Immediately drink calcium solution (calcium tablets dissolved in water). Do NOT induce vomiting. Call a physician immediately.
Most important symptoms and effects, both acute and delayed	: Causes severe skin burns and eye damage. Watch victim for several hours because of possible delayed signs of poisoning. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Notes to physician	: First treatment with calcium gluconate paste. Immediately drink calcium solution (calcium tablets dissolved in water). For specialist advice physicians should contact the Poisons Information Service.

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## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Carbon dioxide (CO <sub>2</sub> ) Dry powder Water spray jet Alcohol-resistant foam
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Heating or fire can release toxic gas.
Specific extinguishing methods	: 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. Use water spray to cool unopened containers.

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

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear personal protective equipment.  
Evacuate personnel to safe areas.  
For further information see Section 8 of the safety data sheet.  
For disposal considerations see section 13.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.
- Methods and materials for containment and cleaning up : Ensure adequate ventilation.  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Sweep up and shovel into suitable containers for disposal.

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## SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection. The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.  
Avoid contact with skin and eyes.  
Ensure that eye flushing systems and safety showers are located close to the working place.  
Do not breathe vapours, aerosols.  
To avoid risks to man and the environment, comply with the instructions for use.
- Hygiene measures : Take off contaminated clothing and shoes immediately.  
Avoid contact with the skin and the eyes.  
Keep away from food, drink and animal feedingstuffs.  
Wash hands before breaks and immediately after handling the product.
- Conditions for safe storage : Store in a place accessible by authorized persons only.  
Store in original container.  
Keep container tightly closed in a dry and well-ventilated place.  
To maintain product quality, do not store in heat or direct sunlight.
- Materials to avoid : Incompatible with bases.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ammonium hydrogendifluoride	1341-49-7	TWA	2.5 mg/m <sup>3</sup> (Fluorine)	AU OEL
		TWA	2.5 mg/m <sup>3</sup> (Fluorine)	ACGIH

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

#### Personal protective equipment

Respiratory protection : In case of inadequate ventilation wear respiratory protection.  
Respirator with a vapour filter (EN 141)

Filter type : Inorganic gas/vapour type

#### Hand protection

Material : Fluorinated rubber

Break through time : 480 min

Glove thickness : 0.4 mm

Material : Nitrile rubber

Break through time : 480 min

Glove thickness : 0.35 mm

Material : butyl-rubber

Break through time : 480 min

Glove thickness : 0.5 mm

Material : Natural Rubber

Break through time : 480 min

Glove thickness : 0.5 mm

Material : PVC

Break through time : 480 min

Glove thickness : 0.5 mm

Material : Polychloroprene

Break through time : 480 min

Glove thickness : 0.5 mm

Remarks : Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Tightly fitting safety goggles  
Eye protection (EN 166)

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Skin and body protection	: Chemical resistant protective clothing according to DIN EN 13034 (Type 6)
Protective measures	: Always have on hand a first-aid kit, together with proper instructions. Ensure that eye flushing systems and safety showers are located close to the working place. Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: colourless
pH	: ca. 4.0
Boiling point/boiling range	: No data available
Flash point	: Not applicable
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Density	: ca. 1.03 g/cm <sup>3</sup>
Solubility(ies) Water solubility	: completely miscible
Explosive properties	: no explosion risk

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Gives off hydrogen by reaction with metals.
Conditions to avoid	: Protect from frost, heat and sunlight.
Incompatible materials	: Incompatible with bases.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

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**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

Acute oral toxicity : Acute toxicity estimate: 753.23 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 1,138 mg/kg  
Method: Calculation method

**Skin corrosion/irritation**

Product : No data available

**Serious eye damage/eye irritation**

Product : No data available

**Respiratory or skin sensitisation**

Product : No data available

**Chronic toxicity****Germ cell mutagenicity**

Product : No data available

**Carcinogenicity**

Product : No data available

**Reproductive toxicity**

Product : No data available

**STOT - single exposure**

Product : No data available

**STOT - repeated exposure**

Product : No data available

**Aspiration toxicity**

Product : No data available

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### **Ammonium hydrogendifluoride:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 422 mg/l  
Exposure time: 96 h

### Persistence and degradability

#### Product:

Biodegradability : Remarks: No data available

### Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### Mobility in soil

#### Product:

Mobility : Remarks: No data available

### Other adverse effects

No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : In accordance with local and national regulations.

Packaging : Dispose of as unused product.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### **IATA-DGR**

UN/ID No. : UN 3264

Proper shipping name : Corrosive liquid, acidic, inorganic, n.o.s.  
(Ammonium Bifluoride/ Ammonium Hydrogen Difluoride,  
Hexafluorotitanic acid, Hydrofluoric Acid)

Class : 8

Packing group : III

Labels : Corrosives

Packing instruction (cargo) : 856



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aircraft)  
 Packing instruction : 852  
 (passenger aircraft)

**IMDG-Code**

UN number : UN 3264  
 Proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
 (Ammonium Bifluoride/ Ammonium Hydrogen Difluoride,  
 Hexafluorotitanic acid, Hydrofluoric Acid)

Class : 8  
 Packing group : III  
 Labels : 8  
 EmS Code : F-A, S-B  
 Marine pollutant : no  
 Remarks : Acids, Clear of living quarters.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations**

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**SECTION 15. REGULATORY INFORMATION**

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

The product is classified and labelled in accordance with EC directives or respective national laws.  
 Regional or national implementations of GHS may not implement all hazard classes and categories.

ACETIC ACID, GLACIAL

Standard for the Uniform : Schedule 6

Scheduling of Medicines and  
 Poisons

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**SECTION 16. OTHER INFORMATION**

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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 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; Nch - Chilean Norm; NO(A)EC

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- No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

#### Further information

Other information :  
Date format : dd.mm.yyyy

AU / EN

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Vertical lines in the left hand margin indicate an amendment from the previous version.

The content of this Safety Data Sheet (SDS) is based on an existing document from an acquired company with adaptations to Section I. The data is currently under validation.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.