

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

### 1.1. Product identifier

Product form : Mixture  
Product name : GIFAbond duo

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

#### 1.2.1. Relevant identified uses

Main use category : Professional use  
Use of the substance/mixture : Adhesive

#### 1.2.2. Uses advised against

No additional information available

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

#### Supplier

Knauf Integral KG  
Am Bahnhof 16  
74589 Satteldorf - Deutschland  
T +49 7951 497-0 - F +49 7951 497-300  
[info@knauf-integral.de](mailto:info@knauf-integral.de) - <https://www.knauf-integral.de>  
E-mail address of competent person responsible for the SDS : [sds-info@knauf.de](mailto:sds-info@knauf.de)

### 1.4. Emergency telephone number

No additional information available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Skin Irrit. 2	H315
Eye Dam. 1	H318
Resp. Sens. 1	H334
Skin Sens. 1	H317
Carc. 2	H351
STOT SE 3	H335
STOT RE 2	H373

Full text of hazard classes and H-statements : see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to displayExtra classification(s) to display

Hazard pictograms (CLP) :



GHS05

GHS07

GHS08

Signal word (CLP) : Danger

Hazardous ingredients : calcium oxide; Polymethylene polyphenyl isocyanate; 4-toluenesulfonylisocyanate

Hazard statements (CLP)	: H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. 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.
Precautionary statements (CLP)	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - IF exposed or concerned: Get medical advice/attention. P310 - Immediately call a POISON CENTER. P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER.
EUH-statements	: EUH204 - Contains isocyanates. May produce an allergic reaction.
Extra phrases	: Restricted to professional users VOC content: 0 g/l

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Not applicable

**3.2. Mixtures**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
calcium oxide	(CAS-No.) 1305-78-8 (EC-No.) 215-138-9 (REACH-no) 01-2119475325-36	≥25 -<50	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Polymethylene polyphenyl isocyanate	(CAS-No.) 9016-87-9 (EC-No.) 618-498-9	≥10-<20	Carc. 2, H351 Resp. Sens. 1, H334 Skin Sens. 1, H317 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
4-toluenesulfonylisocyanate	(CAS-No.) 4083-64-1 (EC-No.) 223-810-8 (EC Index-No.) 615-012-00-7	≥0,1-<0,25	Resp. Sens. 1, H334 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
chlorobenzene	(CAS-No.) 108-90-7 (EC-No.) 203-628-5 (EC Index-No.) 602-033-00-1	≥0,00015- <0,0015	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Aquatic Chronic 2, H411

**Specific concentration limits:**

Name	Product identifier	Specific concentration limits
4-toluenesulfonylisocyanate	(CAS-No.) 4083-64-1 (EC-No.) 223-810-8 (EC Index-No.) 615-012-00-7	( 5 ≤C < 100) Skin Irrit. 2, H315 ( 5 ≤C < 100) STOT SE 3, H335 ( 5 ≤C < 100) Eye Irrit. 2, H319

Full text of H-statements: see section 16

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures after inhalation : Artificial respiration if indicated. immediate medical attention. If possible show this sheet, if not available show packaging or label.

First-aid measures after skin contact	: Take off immediately all contaminated clothing. Dispose in a safe manner in accordance with local/national regulations. Wash every body parts after contact. Wash off with soap and plenty of water. Take a shower.
First-aid measures after eye contact	: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Contact ophthalmologist immediately.
First-aid measures after ingestion	: Do NOT induce vomiting. immediate medical attention. Give a slurry of activated charcoal in water to drink.

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

Symptoms/effects	: Erythema. Skin rash/inflammation. Serious damage to eyes. Destruction of eye tissue. Respiratory or skin sensitization. In case of repeated or prolonged exposure : Harmful by inhalation. Possibly human carcinogenic.
------------------	---

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

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

Suitable extinguishing media	: water.
Unsuitable extinguishing media	: No unsuitable extinguishing media known.

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

Hazardous decomposition products in case of fire	: In case of fire and/or explosion do not breathe fumes. Combustion produces opaque (foggy) gases. Toxic and irritating gases are released.
--	---

#### **5.3. Advice for firefighters**

Protection during firefighting	: Suitable respiratory equipment.
Other information	: Do not allow run-off from fire-fighting to enter drains or water courses. Move containers away from the fire area if this can be done without risk.

### **SECTION 6: Accidental release measures**

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

General measures	: Ensure adequate ventilation.
------------------	--------------------------------

##### **6.1.1. For non-emergency personnel**

Protective equipment	: Personal protective equipment. Wear breathing apparatus if exposed to vapours/dusts/aerosols.
----------------------	---

##### **6.1.2. For emergency responders**

No additional information available

#### **6.2. Environmental precautions**

Contain the spilled material by bunding. Clean up any spills as soon as possible, using an absorbent material to collect it. Avoid sub-soil penetration. Do not allow material to contaminate ground water system. Avoid direct discharge into drains. Recover the cleaning water for later disposal. In case of contamination of soil or water bodies notify the competent authorities.

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

Methods for cleaning up	: Use protective clothing. Absorb with : Sand. Wash immediately with plenty of water. Recover the cleaning water for later disposal.
-------------------------	--

#### **6.4. Reference to other sections**

See Heading 8. For further information refer to section 13.

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

Additional hazards when processed	: Risk of dust explosion.
Precautions for safe handling	: Avoid contact with skin and eyes. Appropriate personal protective equipment. Do not breathe vapours. Ensure that there is a suitable ventilation system. Do not re-use empty containers without proper cleaning or reconditioning. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Keep away from any flames or sparking source. Avoid the build-up of electrostatic charge. Avoid contact with : Incompatible materials:

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

Storage conditions : Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. Use appropriate ventilation.

Incompatible materials : No specific data.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

calcium oxide (1305-78-8)		
EU	Local name	Calcium oxide
EU	IOELV TWA (mg/m³)	1 mg/m³ (Respirable fraction)
EU	IOELV STEL (mg/m³)	4 mg/m³ (Respirable fraction)
chlorobenzene (108-90-7)		
EU	Local name	Monochlorobenzene
EU	IOELV TWA (mg/m³)	23 mg/m³
EU	IOELV TWA (ppm)	5 ppm
EU	IOELV STEL (mg/m³)	70 mg/m³
EU	IOELV STEL (ppm)	15 ppm

### 8.2. Exposure controls

#### Hand protection:

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
protective gloves	Chloroprene rubber (CR)	6 (> 480 minutes)	≥ 0,5		EN ISO 374
protective gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥ 0,35		EN ISO 374
protective gloves	Butyl rubber	6 (> 480 minutes)	≥ 0,5		EN ISO 374
protective gloves	Fluoroelastomer (FKM)	6 (> 480 minutes)	≥ 0,4		EN ISO 374

#### Eye protection:

Type	Use	Characteristics	Standard
Sealed safety goggles	Do not wear contact lenses		EN 166

#### Skin and body protection:

Type	Standard
Complete protective clothing, Materials for protective clothing, Cotton fibres, Polyvinylchloride (PVC), Rubbers, Viton	

#### Respiratory protection:

Device	Filter type	Condition	Standard
filtering face piece	Type AK (Type A - High-boiling (>65 °C) organic compounds, Type K - Ammonia and amines)	In case of inadequate ventilation wear respiratory protection.	EN 141



**Other information:**

Please follow the instructions related to the permeability and the penetration time provided by the manufacturer.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Appearance	: Paste.
Colour	: Beige.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 62 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1,38 – 1,48 g/cm <sup>3</sup> (23 °C)
Solubility	: Water: Insoluble
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 45000 – 55000 mPa·s (23 °C)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

**9.2. Other information**

VOC content	: 0 g/l
Fat solubility	: Partially soluble

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Stable under normal conditions.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Alkali metals. Alkaline earth metals. Alloy. Strong reducing agents. May release flammable gases. Mineral acids. Strong oxidizing agents. Toxic gases are released. May ignite :

**10.4. Conditions to avoid**

No additional information available

**10.5. Incompatible materials**

Oxidizing agent. reducing materials. metals. Mineral acids.

**10.6. Hazardous decomposition products**

Reacts on contact with water releasing carbon dioxide (CO<sub>2</sub>). May polymerize on exposure to temperature rise.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>calcium oxide (1305-78-8)</b>	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral)
LD50 dermal rat	> 2500 mg/kg bodyweight
LD50 dermal rabbit	> 2500 mg/kg bodyweight (EU Method B.3: Acute toxicity (dermal), 24 h, Rabbit, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat (Dust/Mist)	> 6,04 mg/l/4h

<b>Polymethylene polyphenyl isocyanate (9016-87-9)</b>	
LD50 oral rat	> 10000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	10000 mg/kg (OECD 402 method)

<b>4-toluenesulfonylisocyanate (4083-64-1)</b>	
LD50 oral rat	2330 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Read-across, Oral)
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Read-across, Skin)

<b>chlorobenzene (108-90-7)</b>	
LD50 oral rat	> 2000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Additional information : Prolonged or repeated contact with the skin may cause dermatitis  
Symptoms may be delayed  
Small amounts:  
Erythema

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>calcium oxide (1305-78-8)</b>	
LC50 fish 1	50,6 mg/l (OECD 203 method)
EC50 Daphnia 1	≥ 159,6 mg/l (EPA OPP 72-2, 24 h, Crustacea, Static system, Fresh water, Experimental value, Lethal)
EC50 72h algae (1)	184,57 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Read-across, Growth rate)

<b>Polymethylene polyphenyl isocyanate (9016-87-9)</b>	
LC50 other aquatic organisms 1	> 1000 mg/l (96 h, Literature study)

<b>4-toluenesulfonylisocyanate (4083-64-1)</b>	
LC50 fish 1	> 45 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 (algae)	30 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)

<b>chlorobenzene (108-90-7)</b>	
LC50 fish 1	4,5 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value)
LC50 fish 2	7,4 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	26 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 (algae)	11,4 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

**12.2. Persistence and degradability**

<b>calcium oxide (1305-78-8)</b>	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

<b>Polymethylene polyphenyl isocyanate (9016-87-9)</b>	
Persistence and degradability	Not readily biodegradable in water.

<b>4-toluenesulfonylisocyanate (4083-64-1)</b>	
Persistence and degradability	Readily biodegradable in water.

<b>chlorobenzene (108-90-7)</b>	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0,03 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0,41 g O <sub>2</sub> /g substance
ThOD	2,06 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0,0145

**12.3. Bioaccumulative potential**

<b>calcium oxide (1305-78-8)</b>	
Bioaccumulative potential	Not bioaccumulative.

<b>Polymethylene polyphenyl isocyanate (9016-87-9)</b>	
BCF fish 1	1 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	10,46 (Calculated, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>4-toluenesulfonylisocyanate (4083-64-1)</b>	
Partition coefficient n-octanol/water (Log Pow)	0,6 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>chlorobenzene (108-90-7)</b>	
BCF fish 1	3,9 – 40 (Equivalent or similar to OECD 305, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Chronic)
Partition coefficient n-octanol/water (Log Pow)	2,98 (Experimental value, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

**12.4. Mobility in soil**

<b>calcium oxide (1305-78-8)</b>	
Ecology - soil	No (test) data on mobility of the substance available.

<b>Polymethylene polyphenyl isocyanate (9016-87-9)</b>	
Partition coefficient n-octanol/water (Log Koc)	9,078 – 10,597 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

<b>4-toluenesulfonylisocyanate (4083-64-1)</b>	
Ecology - soil	No (test) data on mobility of the substance available.

<b>chlorobenzene (108-90-7)</b>	
Surface tension	33,28 mN/m (20 °C, Converted value)
Partition coefficient n-octanol/water (Log Koc)	2,42 (log Koc, PCKOCWIN v1.66, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

**12.5. Results of PBT and vPvB assessment**

Component	
calcium oxide (1305-78-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Polymethylene polyphenyl isocyanate (9016-87-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
4-toluenesulfonylisocyanate (4083-64-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Recycling is preferred to disposal or incineration. Refer to all applicable national, international and local regulations or provisions.

European List of Waste (LoW) code : 08 04 10 - waste adhesives and sealants other than those mentioned in 08 04 09  
08 04 09\* - waste adhesives and sealants containing organic solvents or other dangerous substances

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

### 14.6. Special precautions for user

#### - Overland transport

Not applicable

#### - Transport by sea

Not applicable

#### - Air transport

Not applicable

#### - Inland waterway transport

Not applicable

#### - Rail transport

Not applicable

### 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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content : 0 g/l

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
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.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
EUH204	Contains isocyanates. May produce an allergic reaction.

Knauf SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*