1.0 Company

Designation of the company (Manufacturer / supplier)

GLEICH Aluminiumwerk GmbH & Co. KG, Kirchhoffstraße 2, D- 24568 Kaltenkirchen, Germany

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Emergency contact

Department for technical product management of GLEICH Aluminiumwerk GmbH & Co. KG

2.0 Designation of the material or of the preparation

Designation of the material or the preparation

Materials group 1	Brand name		Alloy
a) Aluminium cast plate	G.AL® C170R	=	EN AW-5052 [AlMg2,5]
a) Aluminium cast plate	G.AL® C190R	=	EN AW-5754 [AlMg3]
a) Aluminium cast plate	G.AL® C210R	=	EN AW-5083 [AlMg4,5Mn0,7]
a) Aluminium cast plate	G.AL® C210 DYNAMIC	=	EN AW-5083 [AlMg4,5Mn0,7]
b) Aluminium precision cast plate	G.AL® C250	=	EN AW-5083 [AlMg4,5Mn0,7]
b) Aluminium precision cast plate	G.AL® C250 ELOXPLUS	=	EN AW-5083 [AlMg4,5Mn0,7]
c) Aluminium rolled plate		=	EN AW-5754 [AlMg3]
c) Aluminium rolled plate		=	EN AW-5083 [AlMg4,5Mn0,7]
c) Aluminium rolled plate		=	EN AW-6082 [AlSi1MgMn]
d) Aluminium round bars		=	EN AW-6082 [AlSi1MgMn]

G.AL is a registered trademark of GLEICH Aluminium GmbH, Kaltenkirchen, Germany.

Appearance of the material or of the preparation

a) All sides sawed aluminium cast bars, bar segments, plates and plate segments.
b) Both sides fine milled aluminium plates and plate sections equipped with protective PE-foil.
c) Aluminium rolled plates and plate segments, both sides mill scale or brushed surface.
d) Pressed or drawn aluminium round rods and round rod segments.

Use of the material / the preparation

Semi-manufactured products for further processing.
The use of materials group 1 for applications with contact to food products as per DIN EN 602 is admissible.

Materials group 2	Brand name		Alloy
a) Aluminium precision cast plate	G.AL® C330	=	EN AW-7021 [AlZn5,5Mg1,5]
a) Aluminium precision rolled plate	G.AL® 7075 GF	=	EN AW-7075 [AlZn5,5MgCu]
a) Aluminium precision cast plate	UNIDAL®	=	EN AW-7019 [AlZn4Mg2]
b) Aluminium cast plate	G.AL® C330R	=	EN AW-7021 [AlZn5,5Mg1,5]
b) Aluminium cast plate	G.AL® C330 DYNAMIC	=	EN AW-7021 [AlZn5,5Mg1,5]
c) Aluminium rolled plate	CERTAL®	=	EN AW-7022 [AlZn5Mg3Cu]
c) Aluminium rolled plate	CERTAL SPC®	=	AA 7122 [AlZn5Mg3Cu]
c) Aluminium rolled plate		=	EN AW-7075 [AlZn5,5MgCu]
d) Aluminium round bars		=	EN AW-2007 [AlCu4PbMgMn]
d) Aluminium round bars		=	EN AW-7075 [AlZn5,5MgCu]

G.AL is a registered trademark of GLEICH Aluminium GmbH, Kaltenkirchen, Germany.
UNIDAL, CERTAL, CERTAL SPC are registered trademarks of CONSTELLIUM VALAIS S.A, CH.

Appearance of the material or of the preparation

a) All sides sawed aluminium cast bars, bar segments, plates and plate segments.

b) Both sides fine milled aluminium plates and plate sections equipped with protective PE-foil.

c) Aluminium rolled plates and plate segments, both sides mill scale or brushed surface.

d) Pressed or drawn aluminium round rods and round rod segments.

Use of the material / the preparation

Semi-manufactured products for further processing.

The use of materials group 2 for applications with contact to food products as per DIN EN 602 is **not** admissible.

3.0 Possible dangers

General:	Aluminium in the supplied state is not classified as a dangerous substance under currently applicable legislation. Water / humidity on the metal that is fed to the melting over can lead to violent explosions. The material should be stored dry and heated up before feeding to the melting oven.
Dangers	**Product / Protective foil**
Physical-chemical dangers:	See section10
Health hazards:	See section 11
Environmental hazards:	No particular dangers known
Other dangers:	See section 7
Danger symbols:	None
R-statements:	None

4.0 Composition / Information on components

Aluminium group 1

Alloy components as per DIN EN 573-3 in % of the mass, rest Aluminium,
Single values represent the maximum permissible proportion of the relevant element

alloy EN AW-	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	remark	other elements	
										each	total
5052	0,25	0,40	0,10	0,10	2,2-2,8	0,15-0,35	0,10	-	-	0,05	0,15
5083	0,40	0,40	0,10	0,40-1,0	4,0-4,9	0,05-0,25	0,25	0,15	-	0,05	0,15
5754	0,40	0,40	0,10	0,50	2,6-3,6	0,30	0,20	0,15	0,1-0,6 Mn+Cr	0,05	0,15
6082	0,7-1,3	0,50	0,10	0,40-1,0	0,6-1,2	0,25	0,20	0,10	-	0,05	0,15

Aluminium group 2

Alloy components as per DIN EN 573-3 in % of the mass, rest Aluminium,
Single values represent the maximum permissible proportion of the relevant element

alloy EN AW-	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	remark	other elements	
											each	total
2007	0,8	0,8	3,3-4,6	0,50-1,0	0,40-1,8	0,10	0,20	0,8	0,20	-	0,05	0,15
7019	0,35	0,45	0,20	0,15-0,50	1,5-2,5	0,20	0,10	3,5-4,5	-	0,10-0,40 Ti+Zr	0,05	0,15
7021	0,25	0,40	0,25	0,10	1,2-1,8	0,05	-	5,0-6,0	0,10	0,08-0,18 Zr	0,05	0,15
7022	0,50	0,50	0,50-1,0	0,10-0,40	2,6-3,7	0,10-0,30	-	4,3-5,2	-	0,20 Ti+Zr	0,05	0,15
7075	0,40	0,50	1,2-2,0	0,30	2,1-2,9	0,18-0,28	-	5,1-6,1	0,20	0,25 Ti+Zr (agreement)	0,05	0,15

Aluminium group 2

Alloy components as per AA (American Association) in % of the mass, rest Aluminium,
Single values represent the maximum permissible proportion of the relevant element

alloy AA	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	remark	other elements	
										each	total
7122	0,25	0,35	0,50-1,0	0,10	2,6-3,7	0,10	4,3-5,2	0,15	Zr 0,15-0,25	0,05	0,15

Protective foil (Material group 1 and 2)

PE-foil with natural rubber glue and waxes

5.0 First aid measures

Aluminium in its supplied state

After inhalation: Only fine dust and vapours/mist:
In case of inhalation of fine dust or hot vapour, bring the person to a well ventilated area. Rinse nose and mouth. Keep calm and warm. In case of continuing discomfort, contact a physician.

After swallowing: Not relevant

After skin contact: The supplied material is not classified as a health hazard.

After eye contact: Only fine dust:
In case of entry of dust, contact lenses should be removed.
Rinse eyes thoroughly for 15 minutes, in particular under the eyelids.
In case of continuing discomfort, contact a physician.

Polyethylene (PE) foil

After inhalation: Not relevant

After swallowing: Not relevant

After skin contact: The supplied material is not classified as a health hazard.

After eye contact: Not relevant

6.0 Measures for fire-fighting

Aluminium in its supplied state

General: The supplied material is not classified as flammable or explosive.
Danger of explosion
An explosion risk exists for a mix of fine and large particles, if at least 15-20 % of the material is finer than 44 µm.

Appropriate quenching substances: Special powder for metal fires (Dry quenching substance class D), dry sand.

Inappropriate quenching substances: Water, foam, quenching powder, carbon dioxide

Special danger from the product or its products of combustion Not relevant

Special protective equipment when fire-fighting: Do not inhale explosions or fire gases. Use ventilation-dependent respiratory protection.

Polyethylene foil

Suitable fire extinguishing agent: All

Inappropriate quenching substances: Not relevant

Special danger from the product or Its products of combustion: Water vapour. Incompletely burnt carbon dioxide, carbon monoxide, Traces of hydrocarbons

Special protective equipment when fire-fighting: Do not inhale explosions or fire gases. Use ventilation-dependent respiratory protection.

7.0 Measures in case of unintended release

Person-related precautions: Not relevant

Environmental protection measures: Not relevant

Procedures for cleaning / Absorption: Not relevant

8.0 Manipulation and storage

Manipulation

Indications for safe handling: Aluminium
The material may display sharp edges and grooves. Carry protective gloves against mechanical risks as per DIN EN 388.

Hot aluminium does not change colour (tempering colour) and should be secured against access and touching. The temperature of the metal should be measured with the usual instruments before further processing.

Polyethylene foil
The foil edges can cause cuts. Carry protective gloves against mechanical risks as per DIN EN 388.

When rolling off / pulling off the foil, electrostatic loading and subsequent electrical discharges may occur.

Indications about fire and explosion protection: Due to the explosion risk, the aluminium risks should be thoroughly dried before melting.

Requirements towards storage spaces and containers: Store in dry and ventilated places. Do not expose the protective foil to UV rays (no direct sunlight).

Collective storage indications: See section 10

Further information on the storage conditions: not relevant

9.0 Limitation and monitoring of exposition / Personal protective equipment

Additional indications about the design of technical installations: Avoid simultaneous buffing/polishing and grinding (danger of formation of dust particles with explosion hazard). Ensure good ventilation of the workplace.

Components with work-space-related limit values to be monitored:

7429-90-5 Aluminium
AGW 3* 10** mg/m³
2(II);*alveolar **respirable fraction; AGS

BAT-Value
(Aluminium,
TRGS 903)
200 µg/l (Urin), Parameter: Aluminium, Exposition end or shift end

Additional indication
The lists valid upon creation serve as a basis.

Respiratory protection: In case of dust development Filter P2 (identification colour: white)

Hand protection: Carry protective gloves against mechanical risks as per DIN EN 388.
The protection class depends on the task to be executed and should be determined in agreement with the person responsible for work protection at the user's.

Eye protection: Leak-tight protective goggles in case of dust or chip formation.

Body protection: Work protection clothing

General protective measures: Not relevant

Hygiene measures: Wash hands before breaks and at the end of work.
Preventive skin protection thanks to hand protection cream.

Limitation and monitoring of the environment exposure: not relevant

10.0 Physical and chemical properties

Aluminium in its supplied state

State: Solid

Colour: Silver grey

Odour:	Odourless
pH-value:	Not relevant
Melting point:	570 – 610 °C
Boiling point:	Not relevant
Flash point:	Not relevant
Flammability:	Not relevant
Explosion limits:	The product is not an explosion hazard. Dust can for an explosive mixture with air (see section 5.0)
Oxidizing:	No
Density at 20 °C:	2,66 – 2,85 g/cm^3
Viscosity:	Not relevant
Solubility in water:	Not relevant

Polyethylene protective foil

State:	Solid
Colour:	Transparent (G.AL® C250 ELOXPLUS, G.AL® 7075GF, UNIDAL®), **T**ransparent blue (G.AL® C250) Transparent red (G.AL® C330)
Odour:	Typical, faint
pH-value:	Not relevant
Melting point:	100 – 140 °C
Boiling point:	Not relevant
Flash point:	>360 °C
Flammability:	Not relevant
Explosion limits:	Not relevant
Oxidizing:	No
Density at 20 °C:	0,91 – 0,95 g/cm^3
Viscosity:	Not relevant
Solubility in water:	Not relevant

11.0 Stability and reactivity

Aluminium in its supplied state

Stability:	Resistant
Dangerous reactions:	Aluminium in particle form can explode if it mixes with halogenated acids or solvents, bromides, iodates or ammonium nitrate. In case of contact with copper (Cu), lead (Pb) or iron oxide, aluminium particles can strongly react with simultaneous release of heat if an ignition source or intense heat are available.
Dangerous decomposition products:	Aluminium, especially in particle form, reacts in combination with halogenated acids, water and corrosive alkali and thereby generates ignitable hydrogen gas.

Polyethylene protective foil

Stability:	Resistant

Dangerous reactions:	Not relevant
Dangerous decomposition products:	Incompletely burnt carbon dioxide and carbon monoxide, Traces of hydrocarbons

12.0 Toxicological indications

Aluminium in its supplied state

Acute oral toxicity:	Not relevant
Acute dermal toxicity:	Not relevant
Inhalation toxicity:	Not relevant
Irritant effect on the eye:	Not relevant. Aluminium dusts and particles: see section 4.0
Irritant effect on the skin:	Not relevant
Sensitization:	Not relevant
Sub-acute toxicity:	Not relevant
Chronic toxicity:	Not relevant
Mutagenicity:	Not relevant
Reproductive toxicity:	Not relevant
Carcinogenicity:	Not relevant

Polyethylene protective foil

Acute oral toxicity:	Not relevant
Acute dermal toxicity:	Not relevant
Inhalation toxicity:	Not relevant
Irritant effect on the eye:	Not relevant
Irritant effect on the skin:	Not relevant
Sensitization:	Not relevant
Sub-acute toxicity:	Not relevant
Chronic toxicity:	Not relevant
Mutagenicity:	Not relevant
Reproductive toxicity:	Not relevant
Carcinogenicity:	Not relevant

13.0 Environmental indications

Aluminium in its supplied state and polyethylene protective foil

Fish toxicity:	Not relevant
Daphnia toxicity:	Not relevant
Behaviour in environment compartments:	Not relevant
Behaviour in water treatment facilities:	Not relevant
Bacterial toxicity:	Not relevant
Biodegradability:	Aluminium: not applicable

	Polyethylene foil: moderately degradable (rotting)
CSB:	Not relevant
BSB 5:	Not relevant
AOX indication:	No dangerous components
2006/11/EG:	Not relevant

14.0 Indications for disposal

Aluminium in its supplied state

Disposal of product:	Aluminium can be recycled 100% Aluminium as dust or particles: can be reactive. Danger characteristic should be determined before disposal
Disposal / Unclean packaging:	not relevant
EAK-No. (recommended):	12 01 03

Polyethylene protective foil

Disposal of product:	Recycling by appropriate companies or damage-free burning in waste incineration plants. Storage on house waste dumps (EAK 20 01 39)
Disposal / Unclean packaging:	not relevant
EAK-No. (recommended):	20 01 39

15.0 Information on transportation

Aluminium in its supplied state and polyethylene protective foil

These products are not classified as dangerous substances as per applicable transportation legislation for road, rail and air traffic.

Classification as per ADR: - ADR Limited Quantities - Danger note	Not a dangerous product
Classification as per IMDG: - IMDG Limited Quantities: - Danger note:	not classified as „Dangerous Goods“
Classification as per IATA: - Danger note:	not classified as „Dangerous Goods“

16.0 Legal regulations

Aluminium in its supplied state and polyethylene protective foil

Exposure scenario:	Not applicable
Material safety evaluation:	Not applicable
Designation:	The products are not required to be marked as per EC directives.
Danger symbols:	No
R - Statements:	No
S - Statements:	No
Special designation of specific preparations:	No

Designation indications:	No
Certification, title VII:	Not applicable
Limitation, title VIII:	Not applicable
EU directives:	2002/95, 1907/2006, 2002/96
Transportation directives:	none
National directives:	AVV (Directive on the European waste index) KrWAbfG (Recycling management law)
Water endangerment class:	Not applicable
Hazardous incident ordinance:	Not applicable
GISBAU, Product code:	Not applicable
BfR-No.:	Not applicable
Classification as per TA-Luft:	Not applicable
VCI storage class:	Not applicable

17.0 Other indications

Limitations of occupation: No

General information
This safety data sheet is partially based on data and information from safety data sheets of upstream suppliers.
Safety data sheets do not release the user from the obligation of observing or determining process-, end product-specific and individually required safety provisions. The hazards not listed here count as process or application-specific and therefore are not required in this general information.
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