Safety Data Sheet

Created on: 17.08.2015
Revised on:
Valid from: 17.08.2015
Version: 17.08.2015 **Replaces the version: 15/09/2009**

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Substance name / trade name: **Thermit Ignitor**
Index No: Not applicable
EC No: Not applicable
CAS No.: Not applicable
REACH Registration No: Not applicable
Other designations: BAM-PT1-0159 or CE 0589-P1-00119
BAM-ZZL-0007 or CE 0589-P1-00360

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

Relevant identified uses: Ignition agent for thermit welding materials

Uses advised against: -

1.3 Details of the supplier of the safety data sheet:

Manufacturer / supplier
Weco Pyrotechnische Fabrik GmbH

Street/P.O. Box
Bogestrasse 54-56

Postal code
53783 Eitorf

Contact for technical information

Phone / Fax / E-mail
+49 (0) 2243 883 133 / +49 (0) 2243 883 181 / E-mail: msdb@weco-pyro.de

1.4 Emergency call

+49 (0) 2243 883-0

Section 2: Hazard identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Expl. 1.4; H204

Classification according to Directive 67/548/EEC (substances) or Directive 1999/45/EC E; R2

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Pictogram:

GHS01

Signal word: Attention

Hazard components for labeling:

Hazard Statements:

H204	Hazard by fire, or chips, explosion or thrown pieces

Precautionary statements:

P210	Keep away from heat,sparks,open flames and other ignition sources. No smoking.
P234	Keep only in the original container.
P374	Fight fire with normal precautions from a reasonable distance.

Additional labelling
Not applicable

2.3 Other hazards

Burns with a very hot flame after ignition.

Section 3: Composition/information on ingredients

3.1 Substances

This product is a pyrotechnical item.

3.2 Mixtures

Substance name: Barium nitrate
EC No: 233-020-5 CAS No: 10022-31-8 Index No: 056-002-00-7
REACH Registration No : n/s
Concentration: 45%
Classification according to Regulation (EC) No. 1272/2008:
Oxidising solid matter, category 2 H272
Acute toxicity (inhalative, oral), Category 4, H302 + H332

Substance name: Aluminium
EC No: 231-072-3 CAS No: 7429-90-5 Index No: 013-002-00-1
REACH Registration No : n/s
Concentration: 11%
Classification according to Regulation (EC) No. 1272/2008:
Substances or mixtures the contact of which with water generates flammable gases, Category 2, H261
Flammable solid matter, Category 2, H22

Other ingredients: Iron powder, dextrine (no hazardous substances)

Section 4: First aid measures

4.1 Description of first aid measures

After inhalation
Not applicable.

After skin contact
lmmediately rinse with water.

After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

After ingestion
Call a physician immediately

4.2 Most important symptoms and effects, both acute and delayed

The following is applicable to soluble barium compounds in general:
After ingestion: Irritation of the mucous membrane, nausea, salivation, dizziness, vomiting, pain, colics and diarrhea. The following occurs as systemic effects: Heart rhythm disorders, bradycardia (slow heart activity), increase in blood pressure, shocks and circulatory collapse as well muscular stiffness.

The following is applicable to aluminium compounds in general:
After ingestion: Only minimally resorbable through the gastrointestinal tract. Serious disorders in humans (from approx. 4000 mg of aluminium): Phosphate metabolism, calcium metabolism

4.3 Information on immediate medical attention and special treatment needed

The substance contains barium nitrate. Monitor
vital functions and the level of potassium.
After ingestion: Drink a 1-5% sodium sulfate solution and have it vomited. Potassium infusion therapy and, if necessary, a calcium and magnesium therapy against heart rhythm disorders.
After eye contact: Rinsing with a physiological saline solution, the first aid should strictly be followed by an ophthalmological examination.

Section 5: Firefighting measures

5.1 Extinguishing

Suitable: Sand
Unsuitable: Water

5.2 Special hazards arising from the substance or mixture

Highly flammable
The following may be generated in case of a fire: Nitrogen oxides, barium oxide, barium hydroxide - in fire and smoke. Do not inhale fire and explosion gases!
Hydrogen may be generated in contact with water.

5.3 Advice for fire-fighters

Use a water spray jet to control gases/vapours/mists.
Make sure that the extinguishing agents cannot enter the surface water or the ground water system.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Collect spilled thermit igniter.Wash your hands.
Do not return moist or wet thermit igniters into the packaging, but destroy it according to section 13.

6.2 Environmental precautions:

Do not allow it to enter the sewage.

6.3 Methods and material for containment and cleaning up

Pick it up mechanically. Dispose of it in well lockable containers. Avoid the generation of dust. Then, aerate the area involved well and clean contaminated items and surfaces again.
Do not return moist or wet material into the packaging, but strictly dispose of it according to section 13.
Additional information: Remove all ignition sources. Ignition possible by hot surfaces, sparks and open flames.

6.4 Reference to other sections

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

Measures for the protection from fire and explosions
The workplace must be dry. No flammable materials may be in the vicinity of the workplace (e.g. paper, cardboard, wooden structures). Provide a fire extinguishing facility. Usual measures of preventive fire protection.
Keep out of the reach of children. Do not hand it over to persons under the age of 18.
Handle carefully: Danger of breaking.
Destroy material crumbling away from carrying wire according to section 13.
Avoid the generation of dust. Do not inhale dust. Extinguish all open flames, remove all ignition sources. No smoking. Prevent electrostatic charges. Keep away from ignition sources (e.g. open flames, heat sources and sparks).

Aerosol and dust generation prevention
Perform work outdoors or under appropriately designed offtake. Do not inhale the substance. Avoid contact with the eyes, skin and clothes. Observe the information on the label. Blowing off for cleaning purpose is not allowed.

Environmental precautions
Avoid exposure to the environment: Prevent an entering into the soil, water and the sewage system.

General hygienic measures
Observe the usual precautions when handling chemicals. Avoid contact with the eyes and the skin. Take off contaminated clothes.
Do not eat, drink or smoke in the working area.
Wash your hands prior to breaks and at the end of work. A preventive skin protection is recommended. Keep an eyewash bottle or an eye shower in the working area.

7.2 Conditions for safe storage, including incompatibilities

Information on the storage conditions
Store the boxes tightly closed in a cool, dry and well-aerated place. Do not store them in the vicinity of combustible substances, ignition and heat sources.
Do not store it together with feed and food.
Store it separately from other hazardous substances according to the regulations for pyrotechnical items of storage group 1.4.

Requirements for storage rooms and vessels:
Store it dry in the original packaging.

Storage class:

7.3 Specific end uses

Guidelines specific for industries and sectors.
It is exclusively intended for igniting thermit welding materials.
All other uses are not allowed.

Section 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits at the workplace and/or biological limit values at the workplace (AGW) Germany

Substance name: Barium nitrate	; CAS No: 10022-31-8
Specification:	-
Value:	Inhalable fraction acc. to TRGS900
Occupational exposure	0.5 mg/m^3
Teratogenic:	-
Monitoring methods	-

Substance name: Aluminium	; CAS No : 7429-90-5
Specification:	-
Value:	Inhalable fraction acc. to TRGS900
Occupational exposure	10 mg/m^3
Teratogenic:	-
Monitoring methods	-

8.2 Exposure controls

Appropriate technical controls

Individual protective measures - personal protective equipment

Eye / face protection

Face protection or tightly sealed goggles according to EN 166

Skin protection

Gloves

In case of full contact:
Glove material: Nitrile rubber,
Layer thickness (mm): 0.11mm
Penetration time (min.): >480min

In case of spraying contact:
Glove material: Nitrile rubber,
Layer thickness (mm): 0.11 mm
Penetration time (min.): >480min

Other skin protection measures

Respiratory protection

In case of an appropriate use, sufficient areation and compliance with the occupational exposure limits, respiratory protection is not required for the reactive gases and smoke

Protection from heat and cold

The use of the igniter generates a liquid steel alloy at temperatures of more than 1500°C.
Step back from the reaction crucible so that the possibly generated spatters of the molten material do not hit persons. The personal protective equipment and clothing should be determined according to the thermal stress nevertheless possible (clothing, gloves and protective goggles and/or face protection).

Limitation and supervision of environmental exposure

Make sure that the substances do not enter the sewage system, surface waters or soil.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
- Physical state:	Solid Metallic
- Colour:	
Odour:	Odourless
Odour threshold:	-
pH value:	Not applicable
Melting point/freezing point:	Not determined
Boiling point and boiling range:	Not determined
Flash point:	Not determined
Evaporation rate:	Not determined
Flammability (solid, gaseous):	Under the specified storage conditions such as protection from an entry of air oxygen and moisture, the product is not explosive and not self-igniting
Upper/lower flammability or explosive limits:	Not applicable
Vapour pressure:	Not applicable
Vapour density:	Not applicable
Relative density:	
Solubility(ies):	Unsoluble in water and solvents
Partition coefficient: N-octanol/water:	Not applicable
Auto-ignition temperature :	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not applicable
Explosive properties:	Yes
Oxidising properties;	Yes

9.2 Other information

None

Section 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions can be expected in case of a proper use. Hydrogen may be released if water or moisture is generated.

10.2 Chemical stability
The product is chemically stable under normal environmental conditions.

10.3 Possibility of hazardous reactions
Reacts with acids and lyes, generating hydrogen and ammonia

10.4 Conditions to be avoided
Heat, sparks, open fire, other ignition sources.
Moisture, water.

10.5 Incompatible materials
Observe the forbidden mixed storage of the 2nd SprengV. (Explosvies Ordinance)

10.6 Hazardous decomposition products
The following may be generated in case of a fire: Nitrogen oxides, barium oxide, barium hydroxide - in fire and smoke. Do not inhale fire and explosion gases!

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Acute oral toxicity (related to the barium nitrate ingredient, CAS 10022-31-8): LD_{50}
rat, oral: 355mg/kg

Skin corrosion/irritation
No irritating effect

Severe eye damage/irritation
No irritating effect

Sensitisation to the respiratory tract/skin
No sensitizing effects known

Germ cell mutagenicity
Unknown

Carcinogenicity
Unknown

Reproductive toxicity
Unknown

Specific target organ toxicity on single exposure
Unknown

Specific target organ toxicity on repeated exposure
Unknown

Aspiration hazard
Unknown

Symptoms and effects (delayed and chronical) incl. information on the exposition ways
Also: Information on toxicocinetics, metabolism and distribution
See item 4.2

Section 12: Ecological information

12.1 Toxicity
No information available

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

Section 13: Disposal considerations

13.1 Waste treatment methods
Hazardous waste according to the Ordinance on the List of Wastes (AVV). If a use is not possible, the waste must be disposed of in compliance with the local official regulations.
Recommendation:
Disposal by burning small amounts in an open fire. Do not burn in furnaces.
Slag may be disposed of together with the household waste.

Treatment of contaminated packagings
They must be treated according to the official regulations. Non-contaminated and non-residue packagings can be recycled.

Waste code according to the Ordinance on the List of Wastes (AVV)
10 03 05: Aluminium oxide waste (burnt slag)

Special precautions

Relevant EC and other regulations
Waste Directive 2008/98/EC

Section 14: Transport information

14.1 UN number
0432 (pyrotechn. items f. techn. purposes, old SDB: 0337: firework)) 0454 (igniter)

14.2 Proper UN shipping name
ADR/RID
1.4

IMDG Code / ICAO-TI / IATA-DGR
1.4

14.3 Transport hazard classes
1.4S

14.4 Packing group
II (medium danger)

14.5 Enviromental hazards
Identification of material hazardous for the environment
ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR: No

14.6 Special precautions for users
Refer to items 6-8

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
IBC Code
Contamination category (X, Y or Z) : No information available
Type of vessel (1, 2 or 3) : No information available

Section 15: Legal regulations

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

EU regulations, e.g.

Regulation (EC) No 2037/2000 (substances that deplete the ozone layer):
Not applicable
Regulation (EC) No 850/2004 (persistant organic pollutants):
Not applicable
Regulation (EC) No 689/2008 (export and import of dangerous chemicals):
Not applicable / for quantities as usually used in laboratories (max. 10kg)
Regulation (EC) No 648/2004 (regulation on detergents):
Not applicable
Limitations according to Title VIII of the Regulation (EC) No 1907/2006:
No information available

National regulations, e.g.

Water hazard class
WGK 1 (light-harzardous substance)

German Solvents Ordinance (31st BImSchV)
Not applicable

Major Accident Ordinance
12th BImSchV

Technical Instructions on Air quality
Not applicable

Other relevant regulations

SprengG [German Explosives Law]

15.2 Chemical safety assessment

No chemical safety assessment was made for this product.

Section 16: Other information

Modifications versus the last version

Revision for an adaptation to the Ordinance (EC) No 1907/2006

Abbreviations

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road.
AGW	Occupational exposure limit value
AVV	Ordinance on the List of Wastes (AVV)
BImSchV	German Federal Emission Protection Directive
CAS	Chemical Abstracts Service
EG	European Community
EN	European standard
EWG	European Economic Community
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
IATA_DGR	International Air Transport Association – Dangerous Goods Regulations
IBC-Code	International Code for the Construction and Equipment of Ships carrying dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organisation - Technical Instructions
IMDG-Code	International Maritime Code for Dangerous Goods
LD	Lethal dose
MARPOL	Convention for the Prevention of Marine Pollution from Ships
PBT	persistent, bioaccumulative, toxic
REACH	Regulation" of the EU on the Registration, Evaluation, Authorisation and Restriction of the Chemical Substances
RID	RID Ordinance concerning the International Railway transport of hazardous goods
TA	Technical Instruction
TRGS	Technical Rules on Hazardous Substances
vPvB	Very persistent, very bioaccumulative

References and data sources

Methods according to Article 9 of the Ordinance (EC) No. 1272/2008 used for the purpose of evaluating the information for a classification

Wording of the hazard statements and/or precautionary statements referred to in Sections 2 to 15.

Hazard Statements:

H204	Fire or projection hazard
H228	Flammable solid matter
H302	Harmful if swallowed
H332	Harmful if inhaled

Precautionary statements:

P210	Keep away from heat/sparks/open flame/hot surfaces. No smoking.
P234	Store or sell iit only in the original container/packaging
P261	Avoid inhalation of dust / smoke / gas / mist / vapour / aerosol.
P264	Wash thoroughly after use
P270	Do not eat, drink or smoke when using it.
P271	Use only outdoor and in well aerated rooms.
P312	Call the Poison Control Centre or a physician in case of indisposition
P330	Rinse your mouth
P301+P312	If swallowed: Call the Poison Control Centre or a physician in case of indisposition
P304+P340	If inhaled: Bring him/her to outer air and place him/her in a position which facilitates breathing
P374	Fight fire with usual precautions from a reasonable distance.
P402+P404	Store it in a closed container in a dry place.

Trainings for employees

Other information

The statements in our product and safety data sheets are based on our present experiences; however they are no assurance of product properties and do not substantiate a contractual legal relationship.
Existing laws and regulations are to be followed by recipient of our products at their own responsibility.