



FISPQ No.: 0004
PAGES: 1 of 12

CHEMICAL PRODUCT SAFETY INFORMATION RECORD

Product: **THERMIT NATIONAL PLUG/NATIONAL SHIM/NATIONAL STOPPER**

Product Code: **BJ 01101-01 / PC 000-23 / PC 000-31**

FISPQ date: **12/27/2012**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **THERMIT NATIONAL PLUG/NATIONAL SHIM/NATIONAL STOPPER**

Marketed by: **THERMIT DO BRASIL INDÚSTRIA E COMÉRCIO LTDA**

Rua Sargento Sílvio Hollenbach, 601, Barros Filho - Rio de Janeiro - RJ

Zip Code: 21530 - 200

Phone: (21) 2472-4905 – Fax.: (21)2472-4901

EMERGENCY PHONES:

FIRE BRIGADE: 193

ABIQUIM: 0800 11 8270

2. HAZARDS IDENTIFICATION

2.1 Classification of hazards to human health

Acute Toxicity ((Oral, Dermal or Inhalation):

- Warning word: Attention
- Hazard phrase: May be harmful if swallowed, in contact with skin or inhaled
- Precaution phrase: Answer to emergency: If you feel ailment, contact a TOXICOLOGICAL INFORMATION CENTER/PHYSICIAN

Corrosion:

Not applicable

Skin irritation:

- Warning word: Attention
- Hazard phrase: Causes moderate skin irritation

- Precaution phrase: Answer to emergency: In case of skin irritation consult a physician

Eye injuries:



- Warning word: Attention
- Hazard phrase: Causes serious eye irritation
- Precaution phrase: Prevention:
Wash thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
- Precaution phrase: Answer to emergency:
IN CASE OF EYE CONTACT: Rinse thoroughly with water for several minutes. In the case of wearing contact lenses, remove it, if easy. Continue rinsing
If the eye irritation persists: Consult a physician

Respiratory sensibility:



- Warning word: Hazard
- Hazard phrase: When inhaled may cause allergic symptoms, of asthma or airway impairment
- Precaution phrase: Prevention:
Avoid inhaling dusts/fumes/gases/mist/vapors/sprays
In case of inadequate ventilation: Use respiratory protective equipment
- Precaution phrase: Answer to emergency:
IN CASE OF INHALATION: Remove the person to a ventilated place and keep at rest in a position comfortable for breathing
In case of respiratory symptoms: Contact a TOXICOLOGICAL INFORMATION CENTER/PHYSICIAN
- Precaution phrase: Disposal: Dispose the content/container in an industrial landfill

Skin sensibility:



FISPQ No.: 0004
PAGES: 3 of 12

- Warning word: Attention
- Hazard phrase: May cause allergic skin reactions
- Precaution phrase: Prevention:
Avoid inhaling dusts/fumes/gases/mist/vapors/sprays
The contaminated work clothes can not leave the workplace
Wear protective gloves/protective clothing/eye protection/face protection
- Precaution phrase: Answer to emergency:
IN CASE OF SKIN CONTACT: Wash with water and soap abundantly
In case of skin irritation or rash: Consult a physician
Remove all contaminated clothing and wash it before wearing it again
- Precaution phrase: Disposal: Dispose the content/container in an industrial landfill

Germ cell mutagenicity: Not classified

Carcinogenicity:



- Warning word: Hazard
- Hazard phrase: Suspected of causing silicosis. Vulnerable organ: Lung
- Precaution phrase: Prevention:
Obtain specific information before use
Do not handle the product before you read and understand all safety precautions.
Wear protective gloves/pants and long-sleeved shirts/eye protection/face protection
(mask with filter for particulate material)
- Precaution phrase; Answer to emergency: IN CASE OF EXPOSURE OR SUSPICION
OF EXPOSURE: Consult a physician
- Precaution phrase: Storage: Store in a closed area with key
- Precaution phrase: Disposal: Dispose the content/container in an landfill

Toxicity to reproduction and lactation: Not classified

Aspiration hazard:



- Warning word: Attention
- Hazard phrase: May be harmful if swallowed and it penetrates the airways
- Precaution phrase: Answer to emergency:
IN CASE OF SWALLOWED: Immediately contact a TOXICOLOGICAL INFORMATION
CENTER/PHYSICIAN
DO NOT induce vomiting

FISPQ No.: 0004
PAGES: 4 of 12



- Precaution phrase: Storage: Store in a closed area with key
- Precaution phrase: Disposal: Dispose the content/container in an industrial landfill

2.2 Classification of hazards to the aquatic environment: water soluble mixture, harmful to water courses and lakes.

- Precaution phrase; Prevention: Avoid release to the environment
- Hazard phrase: Harmful to aquatic organisms
- Precaution phrase: Disposal: Dispose the content/container in an industrial landfill

2.3 Evaluation of physical hazards: Division 1.6: Extremely insensitive items without danger of mass explosion

3. COMPOSITION AND INGREDIENTS INFORMATION

Product Characteristic: SUBSTANCE MIXTURE

PRODUCT	CHEMICAL OR GENERIC NAME	CAS REGISTRY
Aluminum Oxide	Aluminum oxide	1344-28-1
Tabular Alumina	Tabular alumina	1344-28-1

Chemical formula: Aluminum oxide transformed into compact solid.

Chemical Characterization: Pressed oxides transformed into compact solid.

Chemical Nature: Mixture of powders generating affixation refractory materials. Conditioned in package(s) hermetically sealed(s).

Classification and hazard labeling: Aluminum oxide and tabular alumina (Al₂O₃). In accordance with the NBR ISO 14725-2:2009 the product is not classified as a hazardous substance. No toxicity described to the Al₂O₃ substance.

Tolerance Limit: Brazil - Regulatory Norm No.15 - There is no exposure tolerance limit established. Product not classified.



4. FIRST AID MEASURES

Inhalation: In case of accident remove the person to a ventilated place. Seek medical aid for any breathing difficulty. If breathing is irregular or stop, begin artificial breathing, administering oxygen, if possible.

Skin contact: Remove the contaminated clothing and wash the skin with water and soap.

Eye contact: Wash the eyes with clean water for 15 minutes or until decrease the irritation. Call a physician if the irritation persists.

Ingestion: DO NOT induce vomiting, call a physician immediately.

Actions that must be avoided: Contact with the victim without the use of appropriated protections. Put in risk the life of the rescuer and the victim whenever perform the removal for specialized care.

Protection for the rescuer: Complete protective clothing and individual protective equipment. Use disposable surgical gloves for contact with the victim.

Notes to the physician: Indicate the victim status and the level of exposure to the product. In case of recent ingestion of large quantities, could be performed gastric emptying procedures, such as gastric washes.

Additional Information: In all cases the medical service should be added for complete treatment, observation and support after first aid. Remove any worker who presents allergic reactions to the agent coming from the prolonged contact. Consult a specialist before any worker returns to work in areas where there is exposure to similar material. Contact lenses constitutes a particular risk, so do not use contact lenses in any area. Gelatinous lenses may absorb irritant substances and all other types of lenses concentrate those substances. Particles can adhere to the lens and cause damage to the cornea. Do not use contact lenses in any work area.

5. FIREFIGHTING MEASURES

Inert and non-combustible product.

Extinction media: Not applicable.

Specific hazards of the substance or mixture: Not applicable.

Protective measure of the firefighting team: Pants, long-sleeved shirt and facial mask with filter for particulate matter.



6. CONTROL MEASURES FOR SPILLS AND LEAKS

For personnel who are not part of the emergency services:

Protection equipment: Not applicable.

Sufficient ignition and ventilation sources: When evacuating the industrial areas, turn off machines and equipments and follow the instructions of your company emergency plan.

Procedure in case of emergency: Inert product, however, in case of emergency follow the instructions of the company emergency plan.

For emergency service personnel:

Avoid the exposure of ignition and sparks sources.

Inhalation and contact with the skin, mucous and eyes prevention: Avoid prolonged contact. Use personal protective equipment during the handling and, if swallowed, seek medical attention.

Environment precautions:

The material presents no substantial danger to the environment.

In case of leakage: transfer the material to a suitable container, closed and labeled.

In the case of disposal of the material in an industrial landfill: environmental laws must be respected.

Prevention of secondary hazards: Prevent that the product contaminate or be thrown into water bodies.

Methods and materials for containment and cleaning:

When spilled in water, does not use it for other purposes, when spilled in the soil, utilize conventional cleaning method, storing in suitable container and providing the proper environmental disposal, it is suggested to dispose in industrial landfills.

7. HANDLING AND STORAGE



Precautions for safe handling: Avoid handling conditions that may cause spills. Do not allow the handle of the product without the use of personal protective equipment - PPE (facial mask with filter for particulate matter, pants, boots and long-sleeved shirt).

Safe storage conditions including any incompatibilities: Store the product in a covered, dry, ventilated, away from ignition sources area and keeping the packages closed, preferably on pallets. Was not detected any incompatibility.

Worker prevention: The product is inert but, due to the presence of isoparaffins and solvents we recommend the use of facial protection mask for particulate matter and alcohol fumes (organic) and uniform with pants, long-sleeved shirts and safety shoes.

Fire and explosion prevention: As a preventive way, should be avoided the contact with ignition sources, such as a direct flame. In the case of environment containing aluminum powder, avoid the generation of electrical discharges. Do not smoke.

Technical measures: For greater security, do not eat or drink in product handling areas.

Package materials: The packages must comply with the international legislations.

Materials for Recommended Package:

Inner package: Containers of cardboard, metal or wood. Sheets of paper and plastic trays.

Outer package: Cardboard boxes, common natural wood, plywood, reconstituted wood with liner or inner coating.

Inadequate: Steel, metal or provided with cracks or openings.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Control parameters: Not applicable.

Recommended procedures for monitoring: Adopt the procedures indicated in the NR 15, Ministry of Labour, labor hygiene norms FUNDACENTRO and NIOSH or ACGIH procedures.

Engineering control measures: Manipulate the product in a place with good ventilation or, if necessary, use air circulators or exhausts.

Protective measures for elevated subway.



Respiratory protection : If there are release of dust and fumes, use a facial mask with filter for particles and organic material (isoparaffins and paraffinic hydrocarbons).

Hands protection: Use chemically resistant gloves, such as latex, neoprene or PVC.

Eyes protection: Wear safety or wide vision glasses when there is risk of splashes or dust generation.

Skin and body protection: Utilize full uniform, safety boot, uniform with pants, long-sleeved shirt and safety gloves.

9. PHYSICOCHEMICAL PROPERTIES

Color: White

Physical state: Solid

Odor and odor limit: Odorless

pH: Not available

Melting point/freezing point: Not available.

Initial boiling point and boiling temperature range: Not available.

Flash point: Not available.

Evaporation rate: Not available.

Flammability (solid;gas): Not available

Upper/lower flammability or explosive limit: Not available.

Steam pressure: Not available.

Steam density: Not available.

Relative density: Not available.

Solubility: Not available.

Octanol/water partition coefficient: Not available.

Auto-ignition temperature: Not available

Decomposition temperature: Not available.

Viscosity: Not available.

10. STABILITY AND REACTIVITY

Reactivity: Not available.



Chemical stability: Inert product.

Possibility of hazardous reactions: Not available.

Conditions to be avoided: Not available.

Incompatible materials: Not available.

Decomposition hazardous products: Not available.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Not available.

Skin corrosion/irritation: Not available.

Serious eye injuries/eye irritation: Not available.

Respiratory or skin sensitization: Not available.

Germ cell mutagenicity: Not available.

Carcinogenicity: Not available.

Toxicity to reproduction: Not available.

Organ toxicity - specific target - single exposure: Not available.

Organ toxicity - specific target - repeated exposure: Not available.

Aspiration hazard: Not available.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Persistence and degradability: Not available.

Bioaccumulative potential: Not available.

Mobility in the soil: Not available.

Other adverse effects: Not available.

13. CONSIDERATIONS ON FINAL DESTINATION

Methods of treatment and disposal of residues: The treatment and disposal of the product should be classified according to the ABNT Norm - NBR 10,004 – Residues



classification, its disposal must be performed in industrial landfills complying with all state and local environmental regulations.

Product: The product is inert, but should be stored in a covered, dry, ventilated and free from ignition sources area. Should be handled by trained personnel with knowledge of the safety standards and product risks.

Products debris: Free of impurities, should be stored in plastic bags or clean containers for future reuse and the contaminated debris should have the same treatment of industrial residues.

Used package: Should be performed an environmentally appropriate disposal.

14. TRANSPORT INFORMATION

National and international regulations

The product is classified as hazardous for transport, according to the Ministry of Transport and the United Nations(ONU).

Land Transport : Product not classified by MT, Ordinance 201/1997 and Res. ANTT No. 420 of 02/12/2004.

Waterways Transport: Regulation not defined.

Airway Transport: Regulation not defined.

ONU number: Not applicable.

Proper shipping name: Not applicable.

Class/subclass of main and subsidiary risk: Not applicable.

Risk number: Not applicable.

Package group: Not applicable.

Hazard to the environment: Water soluble mixture, harmful to water courses and lakes.

15. INFORMATION ON REGULATIONS

1. REGULATORY INFORMATION

Regulations



The label printed on the product package is in compliance with the Ordinance 3214 of June 8, 1978 of the Ministry of Labour and Employment which approves the Regulatory Norms - NR - and regulates preventive labeling (NR 26, Art 26.6 sub item 26.6.4.). Label information: If leakage occurs, sweep the place and pack the residue in plastic bags or metal buckets. If there is fire, extinguish with dry sand, pressurized water extinguisher or CO2. For handling, use waterproof gloves. Avoid inhalation, ingestion, contact with skin and eyes.

16. OTHER INFORMATION

The information contained in this record are based on our knowledge of the product. It has been prepared in this record of good faith and represents the best knowledge and experience that you can have on the subject and is intended to describe our product regarding possible concerns, protections to health, occupational safety and the environment, does not mean, however, that completely concludes the subject. We warn that the handling of any chemical substance requires prior knowledge of its hazards for the user. It is up to the company user of the product promotes training of its employees and contractors about the possible risks from the product. The user of the product is solely responsible for determining the regulations applicable to such use in the relevant jurisdiction. The information in this FISQP represents the current data and reflect our best knowledge for the appropriate handling of the product under normal conditions, according to the specific application of the package and/or literature. Any other use of the product involving the combined use with another product or other processes are responsibility of the user. The data and analyzes were based on the Records of Chemical Products from our suppliers, so we take no responsibility for the laboratory analyzes described. This FISQP is updated periodically in accordance with the applicable health and safety standards. This product should be stored and handled by trained personnel and in accordance with the competent local regulations. The information provided here are based on the best of our current knowledge and aims to ensure to the carrier and final user the information available, in order to avoid the risks inherent in the product. We request that this information be knowledge of all the people who have knowledge and direct and indirect contact with the product. For more information, please contact Thermit Brasil., by the phone, fax and e-mail mentioned in page 1/10. This Chemical Product Safety Information Record (FISQP) is in accordance with the NBR 14725 – 3 June/2012.

FISQP No.: 0004
PAGES: 12 of 12

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