



SAFETY DATA SHEET

MATERION

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

1.1. Product identifier

Name of the substance Thorium Nitrate Solution
Identification number 237-514-1 (EC number)
Synonyms None.
Document number 2ID
Materion Code 2ID
Issue date 07-May-2018
Version number 01

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

Identified uses Not available.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Materion Advanced Chemicals Inc.
Address 407 N. 13th Street
1316 W. St. Paul Avenue
Milwaukee, WI 53233
United States
Division Milwaukee
Telephone 414.212.0257
e-mail advancedmaterials@materion.com
Contact person Noreen Atkinson

1.4. Emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

Hazard summary Corrosive. Prolonged contact causes serious eye and tissue damage.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Thorium Nitrate Solution

Hazard pictograms



Signal word Danger

Hazard statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

Prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 Wear respiratory protection.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Response

P302 + P350 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.
IF ON SKIN: Gently wash with plenty of soap and water.

P337 + P313
P362 + P364

If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

Storage

P403 + P233

Store away from incompatible materials.
Store in a well-ventilated place. Keep container tightly closed.

Disposal

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

None.

2.3. Other hazards

Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Thorium Nitrate Solution	100	13470-07-0 237-514-1	-	-	
Classification:	Acute Tox. 4;H302, Skin Irrit. 2;H315				

List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

#: This substance has been assigned Union workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. *Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION 4: First aid measures

General information

IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

Skin contact

Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Ingestion

Seek medical attention.

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

Irritation of eyes. Skin irritation. May cause respiratory irritation. Prolonged exposure may cause chronic effects.

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

Provide general supportive measures and treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards

No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Not available.

5.3. Advice for firefighters

Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special firefighting procedures In case of fire: Stop leak if safe to do so.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained.

For emergency responders Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Stop the flow of material, if this is without risk. Block any potential routes to water systems. Wear appropriate protective equipment and clothing during clean-up.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Avoid contact with eyes, skin, and clothing. Wear appropriate personal protective equipment. Do not use in areas without adequate ventilation. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store in original tightly closed container.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines No exposure standards allocated.

8.2. Exposure controls

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Avoid contact with skin. Avoid contact with eyes. Avoid contact with clothing.

Eye/face protection Wear safety glasses with side shields (or goggles). Face shield is recommended.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

- Other Wear suitable protective clothing.

Respiratory protection Wear suitable respiratory protection.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Private clothes and working clothes should be kept separately. Do not get this material in your eyes, on your skin, or on your clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

Physical state Liquid.

Form	Liquid.
Colour	Pale yellow
Odour	Slight nitric.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	
Molecular formula	Th(NO ₃) ₄ ·xH ₂ O
Molecular weight	480,06 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity	Keep away from combustible material.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Reducing Agents. Metals. Combustible material.
10.6. Hazardous decomposition products	Nitrogen oxides (NO _x). Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.
Symptoms	Irritant effects.
11.1. Information on toxicological effects	
Acute toxicity	Causes skin and eye irritation. May cause irritation to the respiratory system.
Skin corrosion/irritation	Corrosive to skin and eyes. Corrosive effects.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitisation	Due to partial or complete lack of data the classification is not possible.

Skin sensitisation	Irritating to skin.
Germ cell mutagenicity	Due to lack of data the classification is not possible.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)	
	Not listed.
Reproductive toxicity	Not available.
Specific target organ toxicity - single exposure	Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Due to lack of data the classification is not possible.
Mixture versus substance information	No information available.
Other information	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

SECTION 12: Ecological information

12.1. Toxicity	Contains a substance which causes risk of hazardous effects to the environment. Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.
12.2. Persistence and degradability	No data is available on the degradability of this product.
12.3. Bioaccumulative potential	No data available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN2912
14.2. UN proper shipping name	Radioactive material, low specific activity (LSA-I) non fissile or fissile-excepted
14.3. Transport hazard class(es)	
Class	7
Subsidiary risk	-
Label(s)	7
Hazard No. (ADR)	Not available.
Tunnel restriction code	Not available.

14.4. Packing group Not available.
14.5. Environmental hazards No.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number UN2912
14.2. UN proper shipping name Radioactive material, low specific activity (LSA-I) non fissile or fissile-excepted
14.3. Transport hazard class(es)
Class 7
Subsidiary risk -
Label(s) 7
14.4. Packing group Not available.
14.5. Environmental hazards No.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number UN2912
14.2. UN proper shipping name Radioactive material, low specific activity (LSA-I) non fissile or fissile-excepted
14.3. Transport hazard class(es)
Class 7
Subsidiary risk -
Label(s) 7
14.4. Packing group Not available.
14.5. Environmental hazards No.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number UN2912
14.2. UN proper shipping name Radioactive material, low specific activity (LSA-I) non fissile or fissile-excepted
14.3. Transport hazard class(es)
Class 7
Subsidiary risk -
Label(s) 7
14.4. Packing group Not available.
14.5. Environmental hazards No.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

14.1. UN number UN2912
14.2. UN proper shipping name Radioactive material, low specific activity (LSA-I) non fissile or fissile-excepted
14.3. Transport hazard class(es)
Class 7
Subsidiary risk -
Label(s) 7
14.4. Packing group Not available.
14.5. Environmental hazards
Marine pollutant No.
EmS Not available.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.



SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product does not need to be labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended. The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. Additional information is given in the Safety Data Sheet.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

Information on evaluation method leading to the classification of mixture

Not applicable.

Further information

Emergency telephone numbers

Austria - VergiftungsInformationsZentrale, +431.406.43.43
Belgium - Centre Antipoisons - +070.245.245
Bulgaria - Телефон за спешни случаи / факс, +359.2.9154.409
Cyprus - +357.22405611
Czech Republic - Toxikologické informační středisko, +420.224.919.293
Denmark - Akuthjælp ved forgiftning, +82.12.12.12
Estonia - Mürgistusteabekeskuse, 16662
Finland - Myrkytystietokeskus, +(0)9.471.977
France - numéro ORFILA, +33.(0)1.45.42.59.59
Germany - GIZ-Nord Poisons Centre, +49.(0)551.383.1876
Greece - +30.210.64.79.286
Hungary - Az Egészségügyi Toxikológiai Tájékoztató Szolgálat, +36 1 476 6464
Iceland - +354.591.2000
Ireland - National Poisons Information Centre - +353.01.8092566
Italy - Istituto Superiore di Sanità, 064990.2423
Latvia - Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs, +371.67042473
Liechtenstein - +423.236.61.95
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Luxembourg - +352 42 59 91 600
Malta - 2545 0000
Netherlands - NVIC, 030-2748888
Norway - Giftinformasjonen, 22.59.13.00
Poland - Biuro ds. Substancji Chemicznych, +48 42 2538 424
Portugal - 808.250.143
Romania - Biroul RSI si Informare Toxicologica, 021.318.36.06
Slovakia - NTIC, +421.2.5477.4166
Slovenia - Kemična urad Republike Slovenije + 386.14.00.60.51
Spain - Servicio de Información Toxicológica, + 34.91.562.04.20
Sweden - 112

Disclaimer

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