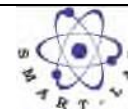


MATERIAL SAFETY DATA SHEET**CHROMIUM NITRATE**

Revision : 00

Date: 28.05.2019

MSDS Number : 0426

Section 1 - Chemical Product and Company Identification

- 1.1 Product Name** : **CHROMIUM NITRATE**
Synonyms : Chromium (III) Nitrate, Chromic Nitrate
CAS No. : 7789-02-8
HS Code : 2834 29 90
Molecular Weight : 400.15 g/mol
Chemical Formula : $\text{Cr}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$ Hill : $\text{CrN}_3\text{O}_9 \cdot 9\text{H}_2\text{O}$
Product Code : A 2546, A 2547
Brand : SMART-LAB
- 1.2 Manufacturer** : **PT.Smart-Lab Indonesia**
Address : Ruko Boulevard Taman Tekno Blok E No.10-11,BSD Sektor XI Serpong, Tangerang - Indonesia
Website : www.smartlabid.com
Email : sales@smartlabid.com
For information : Telp: +62 21- 7588 0205(Hunting) , fax:+62-21-7588 0198
- 1.3 Application** : General Chemical reagent
Emergency Telephone: +62-21-7588 0205(Hunting)

Section 2 - Hazards Identification

- 2.1 Classification of the substance or mixture**
Classification according to Regulation (EC) No 1272/2008
 Oxidizing solids (Category 3), H272
 Skin irritation (Category 2), H315
 Eye irritation (Category 2), H319

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

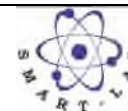
Pictogram



Signal word : warning

Hazard statement(s)
 H272 : May intensify fire; oxidizer.
 H315 : Causes skin irritation.
 H319 : Causes serious eye irritation..

Precautionary statement(s)
 P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P280 : Wear protective gloves/ eye protection/ face protection.
 P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

MATERIAL SAFETY DATA SHEET**CHROMIUM NITRATE**

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P337 + P313

If eye irritation persists: Get medical advice/ attention.

Supplemental Hazard Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3 - Composition, Information on Ingredients

3.1 Substances

Synonyms : Chromium (III) Nitrate, Chromic Nitrate
Formula : $\text{Cr}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$ Hill : $\text{CrN}_3\text{O}_9 \cdot 9\text{H}_2\text{O}$
Molecular weight : 400.15 g/mol
CAS-No. : 7789-02-8
EC-No. : 236-921-1

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Chromium trinitrate CAS-No. 7789-02-8 EC-No. 236-921-1	Ox. Sol. 3; Skin Irrit. 2; Eye Irrit. 2; H272, H315, H319	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4 - First Aid Measures

4.1 Description of first aid measures**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

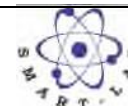
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

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Section 5 - Firefighting Measures

5.1 Extinguishing media**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixtureNitrogen oxides (NO_x), Chromium oxides**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. For precautions see section 2.2.

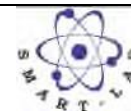
7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): Oxidizing hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8 – Exposure Controls, Personal Protection

MATERIAL SAFETY DATA SHEET**CHROMIUM NITRATE**

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8.1 Control parameters**8.2 Exposure controls****Appropriat engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipmen**Eye/face protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril®

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril®

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

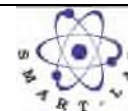
Control of environmental exposure

Do not let product enter drains.

Section 9 - Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Form: crystalline
	Colour: dark violet
Odour	No data available
Odour Threshold	No data available
pH	2.0 - 3.0 at 50 g/l at 20 °C
Melting point/freezingpoint	Melting point/range: 60 °C - lit.

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Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	completely miscible
Partition coefficient: octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	The substance or mixture is classified as oxidizing with the category 3.

9.2 Other safety information

Bulk density 1 g/

Section 10 - Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat

10.5 Incompatible materials

Organic materials, Reducing agents

10.6 Hazardous decomposition productsHazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO_x), Chromium oxides

Other decomposition products - No data available

In the event of fire: see section 5

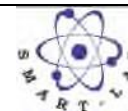
Section 11 - Toxicological Information

11.1 Information on toxicological effects**Acute toxicity**

LD50 Oral - Rat - 3,250 mg/kg(Chromium trinitrate)

Skin corrosion/irritation

No data available(Chromium trinitrate)

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Serious eye damage/eye irritation

No data available(Chromium trinitrate)

Respiratory or skin sensitisation

No data available(Chromium trinitrate)

Germ cell mutagenicity

Human(Chromium trinitrate)

fibroblast

DNA inhibition

Hamster(Chromium trinitrate)

ovary

Cytogenetic analysis

Hamster(Chromium trinitrate)

ovary

Sister chromatid exchange

Carcinogenicity

This product is or contains a component that is not classifiable as to its classification.

(Chromium trinitrate)

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Chromium trinitrate)

Reproductive toxicity

No data available(Chromium trinitrate)

Specific target organ toxicity - single exposure

No data available(Chromium trinitrate)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available(Chromium trinitrate)

Additional Information

RTECS: GB6300000

Section 12 - Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

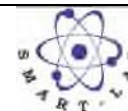
No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(Chromium trinitrate)

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Revision : 00

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12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available.

Section 13 - Disposal Considerations

13.1 Waste treatment methods**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

Section 14 - Transport Information

14.1 UN number

ADR/RID: 2720

IMDG: 2720

IATA: 2720

14.2 UN proper shipping name

ADR/RID: CHROMIUM NITRATE

IMDG: CHROMIUM NITRATE

IATA: Chromium nitrate

14.3 Transport hazard class(es)

ADR/RID: 5.1

IMDG: 5.1

IATA: 5.1

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user**Further information**

No data available

Section 15 - Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

Section 16 - Additional Information

Full text of H-Statements referred to under sections 2 and 3.

H272

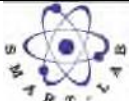
May intensify fire; oxidizer.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

<u>MATERIAL SAFETY DATA SHEET</u>		
CHROMIUM NITRATE		
Revision : 00	Date: 28.05.2019	MSDS Number : 0426

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 1

Special Hazard: OX

Revision history :

Date	Rev	Description
May 28, 2019	00	-

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. PT. Smartlab Indonesia Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.