LT소재주식회사
LT Materials Co.,Ltd.

MATERIAL SAFETY DATA SHEET (MSDS)

Substance	Hi Almit KR19 RS60 SH

Revision Date : Feb/ 15/ 2019

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

A. PRODUCT NAME **Hi Almit KR19 RS60 SH**

B. MATERIAL : METAL ALLOY

C. PRODUCT'S USE : SOLDER, SOLDERING

D. MANUFACTURE'S NAME : LT Materials Co.,Ltd.

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2. HAZARD IDENTIFICATION

A. PRODUCT HAZARD CLASS

Germ cell mutagenicity Class : 2

Carcinogenicity Class : 2

Reproductive toxicity Class : 1A

Specific target organ toxicity (single exposure) Class : 3（respiratory system）

Specific target organ toxicity (repeated exposure) Class : 1（lung), Class : 2（eye respiratory apparatus）

Aquatic environmental toxicity.Long-term : Class : 3

B. LABEL COMTENT

-. SIGNAL : Danger

-. HAZARD WORD

H335 May cause respiratory irritation

H341 Suspected of causing genetic defects

H351 Suspected of causing cancer

H360 May damage fertility or the unborn child

H372 Causes damage to organs through prolonged or repeated exposure

H410 Very toxic to aquatic life with long-lasting effects

-. PREVENTION WORD

☐ PREVENTION

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fumes/gas/mist/vapours/spray.

P261 Avoid breathing dust/fumes/gas/mist/vapours/spray. [As modified by IV ATP]

P264 Wash … thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection. [As modified by IV ATP]

☐ CORRESPOND

P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
[As modified by IV ATP]

P308+313 If exposed: Call a POISON CENTER or doctor/physician.

P314: Get medical advice/attention if you feel unwell.

P391 Collect spillage.

☐ STORAGE

P405 Store locked up.

☐ DISPOSAL

P501 Dispose of contents/ container to an approvedlandfill

C. OTHER HAZARD

: No information

3. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical name	Contents	CAS No.
Tin	59.5 ~ 61.5%	7440-31-5
Lead	REM	7439-92-1
FLUX	2.7 ~ 3.9%	Trade secret

4. FIRST AID MEASURES

A. In case of eye contact

Get medical advice and attention if you feel unwell.

B. In case of skin contact

Wash with plenty of soap and water.

Get medical advice and attention if you feel unwell.

If skin irritation or rash occurs, get medical advice andattention.

Take off contaminated clothing and wash it beforereuse

C. In case of inhalation

Get medical advice and attention if you feel unwell.

D. In case of ingestion

Get medical advice and attention if you feel unwell.

E. Most important symptoms/effects, acuteand delayed

If inhaled : Wheezing.

The effect through prolonged or repeated exposure :May cause eye, nose, throat, skin discoloration.

Eye / skin redness, ocular pain, cough, headache,shortness of breath, sore throat,

abdominal pain,nausea, vomiting.

Delayed symptom : Metal fume fever.

F. Indication of immediate medical attentionand special treatment needed, if necessary

Rest and medical follow-up are indispensable.

5. FIRE FIGHTING MEASURES

A. Suitable extinguishing media

Small fires: Dry chemical, CO2 or water spray.

Large fires: Water spray, fog or regular foam.

B. Prohibited media :

Water

C. Specific hazards with regard to fire-fighting :

No information

D. Protection for firefighters :

Fighters should wear protective clothing, respirator, rubber boots and fireproof clothing.

And should work from the windward side.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipmentand emergency procedures :

Do not touch or walk through spilled material.

B. Environmental precautions :

Pay attention not to cause the influence on theenvironment by discharging into rivers.

Do not release into the environment.

C. Methods and materials for containment andcleaning up :

Gather up, pack in a bag and dispose. Carefully collect remnant and move to a safe place.

7. HANDLING AND STORAGE

A. Handling

Technical measures :

Provide ventilation system and use necessarypersonal protective equipment as described in

in"Section 8 - EXPOSURE CONTROLS / PERSONALPROTECTION".

Safe handling advice :

Prohibit use of heat, sparks, and fire in thesurrounding area.

Evacuate area due to explosion risk in case of fire.

Do not subject to rough handling such as grinding,shock and friction.

Do not contact, breathe or swallow

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed outof the workplace.

Avoid release to the environment.

Hygiene measures :

Wash hand thoroughly after handling.

Do not eat, drink or smoke when using this product.

B. Storage

Suitable storage conditions :

The storage facility should be designed with fire-proofconstruction and beams should use a non-combustible material.

The storage floor should be protected from waterpenetration, or should have water-proof construction.

The storage facility should be provided withnecessary lighting, lighting equipment,and ventilatorto store and handle dangerous goods.

Keep away from heat, sparks, open flames and hotsurfaces. No smoking.

Store away from oxidants

Store in a well-ventilated and cool place keepingcontainer tightly closed.

Protect from sunlight.

Store locked up.

Refer to "Section 10 - STABILITY ANDREACTIVITY".

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

A. Control parameters

Material name	ACGIH (TLV)	OSHA (PEL)
Tin	2mg/m3	2mg/m3
Lead	TWA 0.05 mg/m3	50 µg/m3 TWA

B. Engineering measures

Workplace storing or handling this product should beequipped with eyewashing station and safety shower.

Install ventilation system to keep exposure to airbornecontaminants below the exposure limit if dust and and fume generate in the process handling at elevatedtemperature.

C. Personal protective equipment

Respiratory protection：If necessary, wear appropriate respiratory protectiveequipment.

Hand protection：Wear appropriate protective gloves.

Eye protection：Wear appropriate ｐrotective glasses (ordinary glassestype, ordinary glasses type with side plates, goggletype)

Skin and body protection：Wear suitable protective clothing and face protection.

Specific hygiene measures : Provide eye washing tools and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance : Solder Wire

B. Color : Grey

C. Odor : Scentless

D. Odor threshold : No data

E. pH : No data

F. Melting point : 183~190℃

G. Boiling point : No data

H. Flash point : No data

I. Flammability(Solid,Gas)：No data

J. Flammability or explosive limits：No data

K. Vapor pressure：No data

L. Vapor density：No data

M. Relative density：No data

N. Specific gravity：8.4

O. Resolution temperature：No data

P. Solubility(ies)：Non-pertinence

Q. Partition coefficient: n-octanol/water：Non-pertinence

R. Auto-ignition temperature：Non-pertinence

S. Decomposition temperature：Non-pertinence

T. Viscosity：Non-pertinence

10. STABILITY AND REACTIVITY

A. Stability :

Stable in the air at the normal temperature.

B. Reactions :

May react with strong oxidizing compound, acids and strong bases.

C. Hazardous decomposition products :

Non-pertinence

D. Conditions to avoid :

Non-pertinence

E. Materials to avoid :

Strong oxidizing compound, acids and strong bases.

11. TOXICOLOGICAL INFORMATION

A. Acute toxicity : No data

B. Skin corrosive / irritation： No data

C. Serious eyes damage /Eyes irritation：No data

D. Respiratory organs sensitization：

When fume inhales, may cause allergy, edge breath or dyspnea.

E. Skin sensitization：No data

F. Original generative cell variation：Class 2

G. Carcinogenicity：Class 2

H. Reproduction toxicity：Class 1A

I. Specification target internal organs /Whole toxicity（single revelation)：

Causes damage to organ (respiratory system)

May cause respiratory irritation

J. Specification target internal organs / wholetoxicity（repeat revelation)：

Causes damage to organ (lung) through prolonged or repeated exposure

Causes damage to organ (respiratory organs: inhalation) through prolonged or repeated exposure

Causes damage to organ (liver) through prolonged or repeated exposure

K. Absorption respiratory organs toxicity：No data

12. ECOLOGICAL INFORMATION

A. Aquatic environmental toxicity.acute : No classification

B. Aquatic environmental toxicity.Long-term :

May cause toxicity in the aquatic life according to a long-term influence Class 3

C. Hazardous property to ozone layer : No classification

13. DISPOSAL CONSIDERATIONS

A. Residues

Wear adequate protectors. Dispose in accordance with local regulations.

Consign a qualified industrial waste treatment firm, if there is no own disposal equipment.

B. A pollution container and packing

Wear adequate protectors. Dispose in accordance with local regulations.

Consign a qualified industrial waste treatment firm, if there is no own disposal equipment.

14. TRANSPORT INFORMATION

A. UN No.：Not applicable

B. Proper Shipping Name：Not applicable

C. Class：Not applicable

D. Sub Risk：Not applicable

E. Packing Group：Not applicable

F. International restriction

RID/ADR information：Not applicable

IMO information：Non-Hazards

Marine Pollutant：Not applicable

IATA information：Non-Hazards

G. Domestic restriction

Rail and road transportation information：Not applicable

Marine transportation information：Non-Hazards

Marine Pollutant：Not applicable

Aviation transportation information：Non-Hazards

H. Specific precautionary transport measures and conditions

Prior to transport, check the containers and loading to prevent leakage or turnover,

fall and damage transport in accordance with regulations.

15. REGULATORY INFORMATION

A. Regulation by Chemical Substance Control Act : Not applicable

B. Regulation under dangerous goods safety management law : Not applicable

C. Regulation by waste management law : designated wastes

E. Other domestic and foreign regulations : Not applicable

16. OTHER INFORMATION

A. The information contained in this data sheet does notconstitute an assessment of workplace risks.

Theabove information is based on the present state ofour knowledge of the product at the time ofpublication

It is given in good faith, no warranty is implied withthe respect to the quality or the specification of theproduct

The user must satisfy himself that theproduct is entirely suitable for his purpose.