

APPLICATION NOTE

Procedures for Handling Indalloys (Liquid at Room Temperature)

General Handling Guidelines

- Low melting point alloys are frozen prior to shipping and shipped in an unrefrigerated solid state. This is to reduce the chance of leakage.
- Materials may be stored at room temperature.
- Syringes and cartridges should be stored tip down.
- Gallium-containing alloys have a specific shelf life and should be managed as a first-in, first-out (FIFO) product.
- Unopened bottles have a guaranteed shelf life of one year.
- Alloys are also packaged in polyethylene bottles. They are shipped in accordance with the applicable international regulations and reported as a corrosive liquid. Due to their corrosive nature, they should not be put in contact with most metals.

Ideal Handling Procedures

- Upon receipt in the shipping area, store in a cool, dry area away from incompatible materials including hydrogen peroxide, hydrochloric acid, and halogenated chemicals.
- Older batches should be used prior to newer batches. Batch age can be identified by the manufacture date on the box and jar labels. Use before the expiration date on the label.
- If alloys must be moved between facilities, ensure that the alloy is in accordance transported with hazardous materials procedures.

Handling Immediately Before printing

- Prior to use, gallium alloys should be allowed to reach room temperature and liquefy. Shake or mix before use.
- Allow up to four hours for solidified alloys to reach room temperature. Remove from storage one day before use.
- Rapid warming of alloys on top of ovens or by any other method is not recommended.
- A temperature-controlled water bath may be used. Gallium-containing alloys are very corrosive when hot. Their temperature should not exceed 60C.
- Gallium may be absorbed through the skin. Rubber or vinyl gloves should be worn at all times when handling gallium-containing alloys.

Process Impact of Excessive Heat Exposure

Contact an Indium Corporation Technical Support Engineer to discuss the disposition of heat-damaged alloys.

In-Process Handling

- It is not recommended to repackage gallium-containing alloys.
- Jars or cartridges should be labeled with the date and time of opening.
- As the alloy is removed from the bottle, it is recommended that the volume be replaced with dry Argon to minimize the possibility of oxidation at the surface of the alloy.

Clean-Up

Spills of liquid Indalloys can be cleaned up easily. Place some ice in a plastic bag. Touch the spill with the bag of ice and hold in contact until the alloy freezes (solidifies). Scrape up the solidified alloy with a spatula and it is ready to discard.

Disposal

We strongly encourage the proper disposal of Indalloys in accordance with local regulations and guidelines. Please note that Indium Corporation actively participates in reclamation and recycling efforts for indium- and gallium-containing materials, including Indalloys. The expired and used-up Indalloys and their scraps can be recycled at our facility for credit. Please look out for the Reclaim and Recycle program by Indium Corporation.

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All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified. Indium Corporation is an ISO 9001:2015 registered company.

From One Engineer To Another®

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Form No. 98216 R2

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