Safety Data Sheet

PERMA FLUX

SDS Revision Date: **12/12/2022**

1. Identification

1.1. Product identifier

Product Identity	PERMA FLUX
Alternate Names	15-117, Blended Formula, Perma Flux Self-Cleaning Soldering Flux- 16 oz

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

Intended use	It is used as a non-corrosive, non-freezing flux. Cleans surface for bonding.
Application Method	Read all precautions and instructions carefully before and after use.

1.3. Details of the supplier of the safety data sheet

Company Name	ComStar International Inc. 20-47 128th Street, College Point, NY 11356
Telephone No.	718-445-7900 800-328-0142 Fax: 718-353-5998

Emergency 24 HR response No: 1-800-424-9300 & 703-527-3887 CHEMTREC

Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure, or accident. Please direct all other inquiries to our customer service phone number.

2. Hazard(s) identification

Health Hazards/Precautionary Measures: None anticipated.

Physical Hazards/Precautionary Measures: Keep away from all sources of ignition.

Appearance: Dark colored
Physical Form: Semi-solid
Odor: None

NFPA 704 Hazard Class

Health: 0 **Flammability**: **1** **Instability**: 0 **Legend**: 0 (Least), 1 (Slight), 2 (Moderate), 3 (High), 4 (Extreme)

3. Composition/information on ingredients

NON-HAZARDOUS COMPONENTS

Component	Concentration (wt %)	ACGIH:	OSHA:	NIOSH:	Other:
Petrolatum 8009-03-8	>80	5 mg/m3 TWA 10 mg/m3 STEL 2 mg/m3 TWA	5 mg/m3 TWA	2000 mg/m3 IDLH	As Oil Mist, if Generated As Paraffin Wax Fumes, If Generated 5 mg/m3 NOHSC TWA
ZINC CHLORIDE CAS#: 7646-85-7	<5	Not established	Not established	Not established	Not established
AMMONIUM CHLORIDE CAS#: 12125-02-9	<5	Not established	Not established	Not established	Not established
SURFACTANT CAS# 10028-22-5	<2	Not established	Not established	Not established	Not established

Note: State, local, or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

1%=10,000 PPM.
NE=Not Established

Potential Health Effects
Eye: Not expected to be an eye irritant.

Skin: Not expected to be a skin irritant under normal conditions of use. No harmful effects from skin absorption have been reported.

Inhalation (Breathing): No data available. However, inhalation is not an expected route of exposure.

Ingestion (Swallowing): No harmful effects expected from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the digestive tract, nausea, diarrhea.

Cancer: There is inadequate information to evaluate the cancer hazard of this material. See Section 11 for information on the individual components, if any.

Target Organs: No target-organ effects have been demonstrated in laboratory animal studies.
Developmental: No data available for this material.

4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation If respiratory symptoms develop from exposure to fumes emitted by the molten material, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Eyes If irritation or redness develops from exposure to fumes generated during hot melt processing operations, move victim away from exposure and into fresh air. Flush eyes with clean water. If irritation or redness persists, seek medical attention. For contact with the molten material, gently open eyelids, and flush affected eye(s) with cold, not icy, water. Seek immediate medical attention.

Skin For contact with molten material, leave material on skin and flush or immerse affected area(s) using cold, not icy, water. Seek immediate medical attention.

Ingestion First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

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

Overview No specific symptom data available.
See section 2 for further details.

5. Fire-fighting measures

Flammable Properties:
Flash Point: >390°F / 198.9°C
Test Method: Cleveland Open Cup (COC), ASTM D92
OSHA Flammability Class: Not applicable
LEL (vol % in air): No data
UEL (vol % in air): No data
Autoignition Temperature: No data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. Accidental release measures

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area, and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material. Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended.

7. Handling and storage

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. Exposure controls and personal protection

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required.

Personal Protective Equipment (PPE):

Respiratory: No respiratory protection is required when working with the solid material. If airborne concentrations of wax fumes, generated from molten wax, are expected to exceed exposure limits (see Section 2), a NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use

Skin: Not normally required for solid material. The use of thermally resistant gloves is recommended when there is potential for exposure to molten wax.

Eye/Face: Not normally required for solid material. Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended when exposed to molten wax. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn when dealing with molten material.

Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

9. Physical and chemical properties

Appearance	Dark colored
Odor	Slight
Odor threshold	Not Measured
pH	Not Measured
Melting point / freezing point	>100°F / 37.8°C
Initial boiling point and boiling range	No data
Flash Point	None
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	**Lower Explosive Limit:** 135°C(275°F): NA **Upper Explosive Limit:** 199°C(390°F): NA
Vapor pressure (Pa)	<0.1mmm Hg @ 68°F
Vapor Density	Not Measured
Specific Gravity	0.865@ 60ºF (15.6ºC)
Solubility in Water	Insoluble
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	(ASTM D 2155): NA
Decomposition temperature	Not Measured
Viscosity (cSt)	25C/77F: NA
Volatiles (% by weight)	NA
Octanol/Water Partition Coefficient	NA

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid all possible sources of ignition (see Sections 5 and 7)

10.5. Incompatible materials

Strong Oxidizers

10.6. Hazardous decomposition products

Combustion can yield carbon dioxide and carbon monoxide.

11. Toxicological information

Chronic Data:
No definitive information available on carcinogenicity, mutagenicity, target organ, or developmental toxicity.

12. Ecological information

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully evaluated for hazardous waste characteristics prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container reinstate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state, and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	**DOT Hazard Class:** Not Applicable	**IMDG:** Not Applicable **Sub Class:** Not Applicable	**Air Class:** Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable

14.5. Environmental hazards

IMDG Marine Pollutant: No

14.6. Special precautions for user

No further information

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	Not Regulated
US EPA Tier II Hazards	**Fire:** No
	Sudden Release of Pressure: No
	Reactive: No
	Immediate (Acute): No
	Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:

ZINC CHLORIDE

EPCRA 313 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%):

Zinc chloride

Pennsylvania RTK Substances (>1%):

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The opinions expressed are those of qualified experts within ComStar International Inc. We believe that the information contained is current as of the date of the Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of ComStar International Inc., it is the user's obligation to determine the conditions of safe use of the product.

End of Document