Safety Data Sheet 250-1201

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Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Coating Remover Pen
Product Number:	250-1201
Distributor:	CircuitMedic 22 Parkridge Road, Haverhill, MA 01835 USA PHONE: 978-373-1600, FAX: 978-372-5700
Emergency Response:	For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 CCN4877 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

Section 2. HAZARD IDENTIFICATION

OSHA/HCS status:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture:	FLAMMABLE LIQUIDS - Category 2, ACUTE TOXICITY (oral) - Category 4
Signal word:	Danger.
Hazard statements:	Highly flammable liquid and vapor. Harmful if swallowed.

Precautionary statements.	
Prevention:	Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion proof electrical, ventilating, lighting and all material-handling equipment. Use only nonsparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Response:	IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Storage:	Store in a well-ventilated place. Keep cool.
Disposal:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified:	None known.

Section 3. COMPOSITION, INFORMATION OR INGREDIENTS

Substance/mixture:	Mixture.
Other means of identification:	Remover.

Ingredient name	%	CAS number
tetrahydrofuran	≥90	109-99-9

Any concentration shown as a range is to protect the confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. FIRST AID MEASURES

Description of necessary first aid measures.	
Eye Contact:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin Contact:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion:	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed.	
Potential acute health effects.	
Eye Contact:	May cause eye irritation.
Inhalation:	At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
Skin contact:	May cause skin irritation.
Ingestion:	Harmful if swallowed.

Over-exposure signs/symptoms.	
Eye Contact:	Adverse symptoms may include the following: pain or irritation, redness, watering.
Inhalation:	Adverse symptoms may include the following: dizziness/vertigo, drowsiness/fatigue, headache, nausea or vomiting, unconsciousness.
Skin contact:	Adverse symptoms may include the following: irritation, redness, dryness, cracking.
Ingestion:	Adverse symptoms may include the following: stomach pains, nausea or vomiting.

Indication of immediate medical attention and special treatment needed, if necessary.	
Notes to physician:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments:	No specific treatment.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. FIRE-FIGHTING MEASURES

Extinguishing media.	
Suitable extinguishing media:	Use dry chemical, CO_2, water spray (fog) or foam.
Unsuitable extinguishing media:	Do not use water jet.
Specific hazards arising from the chemical:	Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Hazardous thermal decomposition products:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide.
Special protective actions for fire-fighters:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures.	
For non-emergency personnel:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".
Environmental precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up.	
Small spill:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. HANDLING AND STORAGE

Precautions for safe handling.	
Protective measures:	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear an appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material kept tightly closed when not in use. Store and use away from heat, sparks, open flame, or any other ignition source. Use explosion-proof electrical (ventilating, lighting, and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene:	Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash their hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool, and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep the container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters.
Occupational exposure limits.

Ingredient name	Exposure limits
tetrahydrofuran	ACGIH TLV (United States, 3/2015). Absorbed through skin. STEL: 100 ppm 15 minutes. TWA: 50 ppm 8 hours. NIOSH REL (United States, 10/2013). STEL: 735 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 590 mg/m³ 10 hours. TWA: 200 ppm 10 hours. OSHA PEL (United States, 2/2013). TWA: 590 mg/m³ 8 hours. TWA: 200 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 735 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 590 mg/m³ 8 hours. TWA: 200 ppm 8 hours.

Appropriate engineering controls:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures.	
Hygiene measures:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields.

Skin protection.	
Hand protection:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection:	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance - Physical state:	Liquid.
Appearance - Color	Clear. Colorless.
Odor:	Aromatic.
Odor threshold:	Not available.
pH:	Not available.
Melting point:	Not available.
Boiling point:	Not available.
Flash point:	Closed cup: -14.4°C (6.1°F) [Tagliabue.]
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Lower and upper explosive (flammable) limits:	Lower: 2%, Upper: 11.8%
Vapor pressure:	17.3 kPa (130 mm Hg) [room temperature]
Vapor density:	2.5 [Air = 1]
Relative density:	Not available.
Solubility:	Not available.
Solubility in water:	Not available.
Partition coefficient: noctanol/water:	Not available.
Auto-ignition temperature:	321°C (609.8°F)
Decomposition temperature:	Not available.
Viscosity:	Not available.
Flow time (ISO 2431):	Not available.

Section 10. STABILITY AND REACTIVITY

Reactivity:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability:	The product is stable.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials:	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects.
Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
tetrahydrofuran	LD50 Oral	Rat	1650 mg/kg	-

Irritation/Corrosion:	Not available.
Sensitization:	Not available.
Mutagenicity:	Not available.
Carcinogenicity:	Not available.
Reproductive toxicity:	Not available.
Teratogenicity:	Not available.
Specific target organ toxicity (single exposure):	Not available.
Specific target organ toxicity (repeated exposure):	Not available.
Aspiration hazard:	Not available.
Information on the likely routes of exposure:	Not available.

Potential acute health effects.	
Eye contact:	May cause eye irritation.
Eye contact:	May cause eye irritation.
Inhalation:	At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
Skin contact:	May cause skin irritation.
Ingestion:	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics.	
Eye contact:	Adverse symptoms may include the following: pain or irritation, redness, watering.
Inhalation:	Adverse symptoms may include the following: dizziness/vertigo, drowsiness/fatigue, headache, nausea or vomiting, unconsciousness.
Skin contact:	Adverse symptoms may include the following: irritation, redness, dryness, cracking.
Ingestion:	Adverse symptoms may include the following: stomach pains, nausea or vomiting.

Delayed and immediate effects and also chronic effects from short and long term exposure.	
Short term exposure - Potential immediate effects.	Not available.
Short term exposure - Potential delayed effects.	Not available.
Long term exposure - Potential delayed effects.	Not available.
Long term exposure - Potential delayed effects.	Not available.
Potential chronic health effects.	Not available.

General:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.

Numerical measures of toxicity.	
Acute toxicity estimates.	
Route:	Oral.
ATE value:	1692.3 mg/kg

Toxicity

Section 12. ECOLOGICAL INFORMATION

Product/ingredient name	Result	Species	Exposure
tetrahydrofuran	Acute LC50 2160000 to 2360000 µg/l Fresh water Chronic NOEC 367 mg/l Fresh water	Fish - Pimephales promelas Fish - Pimephales promelas - Embryo	96 hours 33 days

Persistence and degradability	Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
tetrahydrofuran	0.45	-	Low

Mobility in soil	
Soil/water partition coefficient (KOC):	Not available.
Other adverse effects:	No known significant effects or critical hazards.

Section 13. DISPOSAL CONSIDERATIONS

Disposal methods:	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld, or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Tetrahydrofuran (I); Furan, tetrahydro-(I)	109-99-9	Listed	U213

Section 14. TRANSPORT INFORMATION

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	-	-	-	UN2056	UN2056	UN2056
UN proper shipping name	Consumer commodity ORM-D	Consumer commodity ORM-D	Consumer commodity ORM-D	Tetrahydrofuran (tetrahydrofuran)	Tetrahydrofuran (tetrahydrofuran)	Tetrahydrofuran (tetrahydrofuran)
Transport Hazard class(es)	ORM-D	ORM-D	ORM-D	3	3	3
Packing group	-	-	-	-	II-	II
Environmental hazards	No	No	No	No	No	No
Additional information	Reportable quantity 1025.6 lbs / 465.64 kg [138.84 gal / 525.55 L], Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. Small qty exemption, 49 CFR 173.4 (a) (1).	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3).	-	-	-	Excepted Quantity

Special precautions for user:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk according to Annex II of MARPOL and the IBC Coder:	Not available.

Section 15. REGULATORY INFORMATION

U.S. Federal regulations:	TSCA 8(a) PAIR: tetrahydrofuran TSCA 8(a) CDR Exempt/Partial exemption: Not determined United States inventory (TSCA 8b): All components are listed or exempted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs):	Not listed.
Clean Air Act Section 602 Class I Substances:	Not listed.
Clean Air Act Section 602 Class II Substances:	Not listed.
DEA List I Chemicals (Precursor Chemicals:	Not listed.
DEA List II Chemicals (Essential Chemicals):	Not listed.
SARA 302/304 Composition/information on ingredients:	No products were found.
SARA 304 RQ:	Not applicable.
SARA 311/312 - Classification:	Fire hazard Immediate (acute) health hazard.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
tetrahydrofuran	≥90	Yes	No	No	Yes	Yes

State regulations	
Massachusetts:	The following components are listed: TETRAHYDROFURAN; BUTYLENE OXIDE
New York:	The following components are listed: Tetrahydrofuran
New Jersey:	The following components are listed: TETRAHYDROFURAN; 1,4-EPOXYBUTANE
Pennsylvania:	The following components are listed: FURAN, TETRAHYDRO-

International regulations.	
Chemical Weapon Convention List Schedules I, II & III Chemicals:	Not listed.
Montreal Protocol (Annexes A, B, C, E):	Not listed.
Stockholm Convention on Persistent Organic Pollutants:	Not listed.
Rotterdam Convention on Prior Informed Consent:	Not listed.
UNECE Aarhus Protocol on POPs and Heavy Metals:	Not listed.

International lists - National inventory	
Australia:	All components are listed or exempted..
Canada:	All components are listed or exempted.
China:	All components are listed or exempted.
Europe:	All components are listed or exempted.
Japan:	Japan inventory (ENCS): All components are listed or exempted. Japan inventory (ISHL): Not determined.
Malaysia:	All components are listed or exempted.
New Zealand:	All components are listed or exempted.
Philippines:	All components are listed or exempted.
Republic of Korea:	All components are listed or exempted.
Taiwan:	All components are listed or exempted.
Turkey:	All components are listed or exempted.

Section 16. OTHER INFORMATION

Hazardous Material Information System (U.S.A.).	
Health:	2
Flammability:	3
Physical hazards:	1

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