

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** KD111D KNOCK DOWN BED BUG KILLER .25% PYRETHRINS FROM CHRYSANTHEMUM FLOWER PY  
**Other means of identification**  
**Product code** KD111D  
**Recommended use** Pesticide  
**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

**Company name** KUUS INC.  
**Address** 450 TAPSCOTT ROAD  
SCARBOROUGH, ON M1B 1Y4  
Canada  
**Telephone** General Assistance 1-416-298-7724  
**E-mail** Not available.  
**Emergency phone number** Canutec 1-888-226-8832  
1-613-996-6666

## 2. Hazard(s) identification

**Physical hazards** Flammable aerosols Category 1

**Health hazards** Not classified.

#### Label elements



**Signal word** Danger

**Hazard statement** Extremely flammable aerosol.

#### Precautionary statement

**Prevention** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

**Response** Not available.

**Storage** Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 1

Hazardous to the aquatic environment, long-term hazard Category 1

**Other hazards** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isobutane		75-28-5	15 - 40
Distillates (petroleum), Hydrotreated Light		64742-47-8	7 - 13
Propane		74-98-6	3 - 7

Chemical name	Common name and synonyms	CAS number	%
Piperonyl Butoxide		51-03-6	1 - 5
Pyrethrins		8003-34-7	0.1 - 1
Other components below reportable levels			40 - 70

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First-aid measures

<b>Inhalation</b>	If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	In the unlikely event of swallowing contact a physician or poison control center.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
<b>General fire hazards</b>	Extremely flammable aerosol.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
<b>Environmental precautions</b>	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Isobutane (CAS 75-28-5)	STEL	1000 ppm
Pyrethrins (CAS 8003-34-7)	TWA	5 mg/m <sup>3</sup>

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm
Pyrethrins (CAS 8003-34-7)	TWA	5 mg/m <sup>3</sup>

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)	TWA	200 mg/m <sup>3</sup>	Non-aerosol.
Pyrethrins (CAS 8003-34-7)	TWA	5 mg/m <sup>3</sup>	

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Isobutane (CAS 75-28-5)	STEL	1000 ppm
Pyrethrins (CAS 8003-34-7)	TWA	5 mg/m <sup>3</sup>

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Isobutane (CAS 75-28-5)	TWA	800 ppm
Pyrethrins (CAS 8003-34-7)	TWA	5 mg/m <sup>3</sup>

#### Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m <sup>3</sup> 1000 ppm
Pyrethrins (CAS 8003-34-7)	TWA	5 mg/m <sup>3</sup>

**Biological limit values** No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

#### Canada - British Columbia OELs: Skin designation

Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8) Can be absorbed through the skin.

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Aerosol.
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	149.18 °F (65.1 °C) estimated
<b>Flash point</b>	-99.4 °F (-73.0 °C) Propellant estimated
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	0.6 % estimated
<b>Flammability limit - upper (%)</b>	4.9 % estimated
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	40.83 psig @70F estimated
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	610.52 °F (321.4 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Flammability class</b>	Flammable IB estimated
<b>Heat of combustion (NFPA 30B)</b>	17.02 kJ/g estimated
<b>Oxidizing properties</b>	Not oxidizing.
<b>Specific gravity</b>	0.838 estimated
<b>VOC (Weight %)</b>	0.59 % estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents. Nitrates. Fluorine. Chlorine.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

#### Acute toxicity

Components	Species	Test Results
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg > 2000 mg/kg, 24 Hours
<b>Inhalation</b>		
LC50	Rat	> 7.5 mg/l, 6 Hours > 4.6 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	> 5000 mg/kg
Isobutane (CAS 75-28-5)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l
Piperonyl Butoxide (CAS 51-03-6)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	-	> 2000 mg/kg
<b>Inhalation</b>		
LC50	Rat	> 5.2 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	> 2000 mg/kg
Propane (CAS 74-98-6)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes

Components	Species	Test Results
	Rat	1355 mg/l 658 mg/l/4h

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.  
**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**Canada - British Columbia OELs: Respiratory or skin sensitiser**

Pyrethrins (CAS 8003-34-7) Capable of causing respiratory, dermal or conjunctival sensitization.

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

**ACGIH Carcinogens**

Pyrethrins (CAS 8003-34-7) A4 Not classifiable as a human carcinogen.

**Canada - Manitoba OELs: carcinogenicity**

PYRETHRUM (CAS 8003-34-7) Not classifiable as a human carcinogen.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Piperonyl Butoxide (CAS 51-03-6) 3 Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**12. Ecological information**

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)		
<b>Aquatic</b>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 2.9 mg/l, 96 hours
Piperonyl Butoxide (CAS 51-03-6)		
<b>Aquatic</b>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 0.0027 - 0.0043 mg/l, 96 hours
Pyrethrins (CAS 8003-34-7)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia) 0.018 - 0.032 mg/l, 48 hours
Fish	LC50	Brown trout (Salmo trutta) 0.0165 - 0.0229 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

**Partition coefficient n-octanol / water (log Kow)**

Isobutane 2.76  
Piperonyl Butoxide 4.75  
Propane 2.36

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### 14. Transport information

#### TDG

**UN number** UN1950  
**UN proper shipping name** AEROSOLS, flammable  
**Transport hazard class(es)**  
**Class** 2.1  
**Subsidiary risk** -  
**Packing group** Not applicable.  
**Environmental hazards** Yes  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling. This product meets the exemption requirements and may be shipped as a limited quantity.

#### IATA

**UN number** UN1950  
**UN proper shipping name** Aerosols, flammable  
**Transport hazard class(es)**  
**Class** 2.1  
**Subsidiary risk** -  
**Label(s)** 2.1  
**Packing group** Not applicable.  
**Environmental hazards** Yes  
**ERG Code** 10L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

#### Other information

**Passenger and cargo aircraft** Allowed with restrictions.  
**Cargo aircraft only** Allowed with restrictions.

#### IMDG

**UN number** UN1950  
**UN proper shipping name** AEROSOLS  
**Transport hazard class(es)**  
**Class** 2.1  
**Subsidiary risk** -  
**Label(s)** 2.1  
**Packing group** Not applicable.  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** F-D, S-U  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

IATA; IMDG; TDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant.

## 15. Regulatory information

### Canadian regulations

#### Controlled Drugs and Substances Act

Not regulated.

#### Export Control List (CEPA 1999, Schedule 3)

Not listed.

#### Greenhouse Gases

Not listed.

#### Precursor Control Regulations

Not regulated.

### International regulations

#### Stockholm Convention

Not applicable.

#### Rotterdam Convention

Not applicable.

#### Kyoto protocol

Not applicable.

#### Montreal Protocol

Not applicable.

#### Basel Convention

Not applicable.

### International Inventories

#### Country(s) or region

#### Inventory name

#### On inventory (yes/no)\*

Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No



Country(s) or region	Inventory name	On inventory (yes/no)*
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other Information

<b>Issue date</b>	05-12-2023
<b>Version #</b>	02
<b>Disclaimer</b>	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
<b>Revision information</b>	Product and Company Identification: Alternate Trade Names