SAFETY DATA SHEET

1. Identification

Product identifier	KD243C KNOCK DOWN FAR INSTITUTIONAL INSECT KILI	M, LIVESTOCK, FOOD PROCESSING PLANTS & LER
Other means of identification		
Product code	KD243C	
Recommended use	PESTICIDE	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/	Distributor information	
Manufacturer		
Company name	KUUS INC.	
Address	450 TAPSCOTT ROAD	
	SCARBOROUGH, ON M1B1Y	[′] 4
	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
Health hazards	Sensitization, skin
Label elements	
Signal word	Danger
Hazard statement	Extremely flammable aerosol. May cau

Hazard statement	Extremely flammable aerosol. May cause an allergic skin reaction.	
Precautionary statement		
Prevention	Do not spray on an open flame or other ignition	en flames and other ignition sources. No smoking. n source. Do not pierce or burn, even after use. ing should not be allowed out of the workplace.
Response	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.	
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.	

Category 1 Category 1

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isobutane		75-28-5	15 - 40

Chemical name Common name and synonyms		CAS number	%	
Naphtha (Petroleum), Hydrotreated Heavy		64742-48-9	3 - 7	
Propane		74-98-6	3 - 7	
Distillates (petroleum), Hydrotreated Light		64742-47-8	1 - 5	
Permethrin		52645-53-1	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 Inhalation Move to fresh air. Call a physician if symptoms develop or persist. In case of eczema or other skin disorders: Seek medical attention and take along these Skin contact instructions. Eye contact Rinse with water. Get medical attention if irritation develops and persists. Ingestion Rinse mouth. Get medical attention if symptoms occur. Most important May cause an allergic skin reaction. Dermatitis. Rash. symptoms/effects, acute and delayed Indication of immediate Provide general supportive measures and treat symptomatically. Keep victim under observation. medical attention and special Symptoms may be delayed. treatment needed **General information** Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Not available.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	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.
Specific methods	Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.
6. Accidental release meas	sures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. 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.
Methods and materials for containment and cleaning up	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. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	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.

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. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. 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

Components	Туре	Value	
Isobutane (CAS 75-28-5)	STEL	1000 ppm	
Canada. Alberta OELs (Occ Components	cupational Health & Safety Code, Type	Schedule 1, Table 2) Value	
Propane (CAS 74-98-6)	TWA	1000 ppm	
Canada. British Columbia C Safety Regulation 296/97, a		imits for Chemical Substances, Oc	ccupational Health and
Components	Туре	Value	Form
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)	TWA	200 mg/m3	Non-aerosol.
Canada. Manitoba OELs (Re	eg. 217/2006, The Workplace Saf	-	
Components	Туре	Value	
Isobutane (CAS 75-28-5)	STEL	1000 ppm	
Canada. Ontario OELs. (Co Components	ntrol of Exposure to Biological o Type	or Chemical Agents) Value	
Isobutane (CAS 75-28-5)	TWA	800 ppm	
Canada. Quebec OELs. (Min Components	nistry of Labor - Regulation Resp Type	pecting the Quality of the Work En Value	vironment)
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm	
logical limit values	No biological exposure limits not	ted for the ingredient(s).	
oosure guidelines			
Canada - British Columbia Distillates (petroleum), H 64742-47-8)	•	Can be absorbed through the skin.	
propriate engineering trols	should be matched to conditions or other engineering controls to	Ily 10 air changes per hour) should b s. If applicable, use process enclosur maintain airborne levels below recon stablished, maintain airborne levels t	es, local exhaust ventilatio nmended exposure limits. I
vidual protection measures Eye/face protection	, such as personal protective equ Face shield is recommended. W	uipment /ear safety glasses with side shields	(or goggles).
Skin protection Hand protection	For prolonged or repeated skin o	contact use suitable protective gloves	S.

Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	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. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

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Appearance	
Physical state	Gas.
Form	Aerosol.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	165.63 °F (74.24 °C) estimated
Flash point	-99.4 °F (-73.0 °C) PROPELLANT estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	1.2 % estimated
Flammability limit - upper (%)	9.3 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	720.56 °F (382.53 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	0.844 estimated
10. Stability and reactivity	

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.Chemical stabilityMaterial is stable under normal conditions.Possibility of hazardous
reactionsHazardous polymerization does not occur.Conditions to avoidAvoid temperatures exceeding the flash point. Contact with incompatible materials.Incompatible materialsStrong oxidizing agents. Nitrates. Fluorine. Chlorine.Hazardous decomposition
productsNo hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Skin contactMay cause an allergic skin reaction.Eye contactDirect contact with eyes may cause temporary irritation.IngestionExpected to be a low ingestion hazard.Symptoms related to the physical, chemical and colocological direct-text is caller gives kin reaction. Dermatitis. Rash.ComponentMay cause an allergic skin reaction.ComponentsSpeciesTest ResultsComponentsSpeciesTest ResultsDistilates (petroleum), Hydrotreated Light (CAS 64742-47-8)2000 mg/kgAcute toxicityRabbit2000 mg/kgDistilates (petroleum), Hydrotreated Light (CAS 64742-47-8)2000 mg/kg, 24 HoursDistilates (petroleum), Hydrotreated Light (CAS 64742-47-8)2000 mg/kg, 24 HoursDistilates (petroleum), Hydrotreated Light (CAS 64742-47-8)2000 mg/kg, 24 HoursDistilates (CAS 75-28-5)3000 mg/kgKatter1235 mg/l, 140 MinutesLCS0Rat237 mg/l, 120 MinutesLCS0Mouse1237 mg/l, 120 MinutesLCS0Rat2480 mg/m3Acute2490 mg/m3, 4 HoursLCS0Rat2490 mg/m3, 4 Hours<	Information on likely routes o	-	acted
Eye contactDirect contact with eyes may cause temporary irrilation.IngestionExpected to be a low ingestion hazard.Symptoms related to theHay cause an allergic skin reaction. Demnatities. Raining temporary irrilation.Protect on toxicological characteristicsHay cause an allergic skin reaction. Demnatities. Raining temporary irrilation.ComponentsMay cause an allergic skin reaction.ComponentsSpeciesExe ResultsDermal-Exe ResultsLossAcute-LossRabbit-LossRabbit-LossRata-CoriaLossRata-LossRata-AcuteLossMause-LossRata-AcuteLossMouse1237 mg/l, 120 MinutesLossRata-AcuteLossRata-AcuteLossMouse-LossRata-AcuteLossRata-AcuteAcuteAcuteAcuteAcuteAcuteAcuteAcuteAcuteAcuteAcuteAcute<		No adverse effects due to inhalation are expected.	
Ingestion Expected to be a low ingestion hazard. Symptoms related to the physical, chemical and toxicological characteristics May cause an allergic skin reaction. Dermatitis, Rash. physical, chemical and toxicological characteristics Information on toxicological effects Vertex Acute toxicity May cause an allergic skin reaction. Components Species Test Results Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8) Section Section Acute toxicity Mabit > 2000 mg/kg Section Dermal LD50 Rat > 2000 mg/kg. 24 Hours Inhalation Section Section Section LD50 Rat > 5000 mg/kg Section LD50 Rat > 5000 mg/kg. 24 Hours Section LD50 Rat 1237 mg/l, 120 Minutes Section LD50 Rat 1237 mg/l, 120 Minutes Section LC50 Rat 1355 mg/l Section LC50 Rat 4980 mg/m3 4980 mg/m3 LC50 Rat 4980 mg/m3 4980 mg/m3 LC50 </th <th></th> <th colspan="2"></th>			
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Dermal 2000 mg/kg L5G Rabit 2000 mg/kg Inlation -2000 mg/kg 2400 mg/kg L5G Rat -7.5 mg/k 640 mg/kg L5G Rat -2.5 mg/k -2.5 mg/kg D7a -2.5 mg/kg -2.5 mg/kg -2.5 mg/kg L5G Rat -2.5 mg/kg -2.5 mg/kg L5D Mass 12.5 mg/kg -2.5 mg/kg L5D Mass 12.5 mg/kg -2.5 mg/kg L5D Rat 2.5 mg/kg -2.5 mg/kg L5D Rat -2.5 mg/kg -2.5 mg/kg <td< td=""><td>Distillates (petroleum), Hydrotre</td><td>eated Light (CAS 64742-47-8)</td><td></td></td<>	Distillates (petroleum), Hydrotre	eated Light (CAS 64742-47-8)	
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52 %, 120 Minutes Rat 1355 mg/l	Inhalation		
Rat 1355 mg/l	LC50	Mouse	1237 mg/l, 120 Minutes
•			52 %, 120 Minutes
		Rat	1355 mg/l
658 mg/l/4n			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	1
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	
IARC Monographs. Overall	Evaluation of Carcinogenicity
Permethrin (CAS 52645-	53-1) 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

cotoxicity	Very toxic	to aquatic life with long lasting effects.	
Components		Species	Test Results
Distillates (petroleum)	, Hydrotreated Light	t (CAS 64742-47-8)	
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours
Permethrin (CAS 5264	45-53-1)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.0006 - 0.0025 mg/l, 48 hours
Fish	LC50	Apache trout (Oncorhynchus gilae apache)	0.0013 - 0.0022 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 coefficie	ent n-octanol / water (log Kow)	
Isobutane		2.76
Permethrin		6.5
Propane		2.36
	No data available	

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

IDG	
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 exemp	tion requirements and may be shipped as a limited quantity.
ΙΑΤΑ	
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

IMDG Regulated Marine Pollutant.



General information

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)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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

Issue date	06-06-2019
Version #	02

	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.
Revision information	Product and Company Identification: Alternate Trade Names