



# Material Safety Data Sheet

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name/Identifier</b>	Contact Cleaner -Fast Dry (Aerosol)
<b>Product Code</b>	EE1331-A
<b>Product Use</b>	Cleaning solvent for removing dust, dirt deposits, etc from contact points, sensitive surfaces containing circuitry or PCB boards
<b>Company Information</b>	Vance Chemicals Pte Ltd No.24 Gul Lane Singapore 629418 +65 6863 0863 <a href="mailto:msds@mr-mckenic.com">msds@mr-mckenic.com</a>
<b>Emergency Contact</b>	+65 9299 8024

## SECTION 2 HAZARDS IDENTIFICATION

### GHS CLASSIFICATION

Health		Environmental		Physical
Eye irritation	Category 2	Acute aquatic toxicity	Category 3	Not Classified
Skin irritation	Category 2	Chronic aquatic toxicity	Category 3	
Acute toxicity (Oral)	Category 5	Hazardous to ozone layer	Category 1	
Acute toxicity (dermal)	Category 5			

### GHS LABEL:

### EU LABEL:





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## Hazard Statements:

Code	Health hazard statements	Hazard class	Hazard category
H313	<b>May be harmful in contact with skin</b>	Acute toxicity, Oral (chapter 3.1)	5
		Acute toxicity, dermal (chapter 3.1)	5
H320	<b>Causes eye irritation</b>	Eye damage/irritation(chapter 3.3)	2
H402	<b>Harmful to aquatic life</b>	Hazardous to the aquatic environment, acute hazard (chapter 4.1)	3
H412	<b>Harmful to aquatic life with long lasting effect</b>	Hazardous to the aquatic environment, long-term hazard (chapter 4.1)	3
H420	<b>Harms public health and the environment by destroying ozone in the upper atmosphere</b>	Hazardous to the ozone layer (chapter 4.2)	1

## Precautionary Statements

### Prevention:

Code	Prevention precautionary statements	Hazard class	Hazard category
P264	<b>Wash thoroughly after handling</b>	Eye damage/irritation(chapter 3.3)	2
P273	<b>Avoid release to the environment</b>	Hazardous to the aquatic environment, acute hazard (chapter 4.1)	3
		Hazardous to the aquatic environment, long-term hazard (chapter 4.1)	3

### Response:

Code	Response precautionary statements	Hazard class	Hazard category
P305+P351+P338	<b>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</b>	Eye damage/irritation(chapter 3.3)	2
P312	<b>Call a POSION CENTER or doctor/physician if you feel unwell.</b>	Acute toxicity, dermal (chapter 3.1)	5
P337+P313	<b>If eye irritation persists: Get medical advice/attention.</b>	Eye damage/irritation(chapter 3.3)	2



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## Disposal:

Code	Disposal precautionary statements	Hazard class	Hazard category
P501	Dispose of content/containers according to the local/regional/national/international regulation.	Hazardous to the aquatic environment, acute hazard (chapter 4.1)	3
		Hazardous to the aquatic environment, long-term hazard (chapter 4.1)	3
P502	Refer to manufacturer/supplier for information on recovery/recycling.	Hazardous to the ozone layer (chapter 4.2)	1

## SECTION 3 COMPOSITIONS / INFORMATION ON INGREDIENTS

Chemical Identity	CAS #	EINECS #	R Phrase	S Phrase	Weight %
Naphtha (Petroleum) hydrodesulfurized light, dearomatized	92045-53-9	295-434-2	R11, R38, R50/53, R65, R67	S9, S16, S23, S24, S33, S43A, S57, S60, S62	10-30
1,1-dichloro-1-fluoroethane	1717-00-6	404-080-1	R52/53, R59	S59, S61	>60

## SECTION 4 FIRST AID MEASURES

<b>Eye contact</b>	Immediately flush eyes with large amounts of water for at least 15 minutes while holding the eyelids open. If redness, swelling, pain and blister occur, transport to the nearest medical facility for additional treatment.
<b>Skin contact</b>	Remove contaminated clothing. Flush exposed area with large amounts of water for at least 15 minutes followed by washing with soap. If redness, swelling, pain and blister occur, transport to the nearest medical facility for additional treatment.
<b>Inhalation</b>	Remove to open area for fresh air. If rapid recovery does not occur, transport to the nearest medical facility for additional treatment.
<b>Ingestion</b>	If swallowed, do not induce vomiting; transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspirations.

## SECTION 5 FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Non-flammable. Use water spray, fog or foam to cool fire exposed surfaces and to protect personnel.
<b>Unsuitable Extinguishing Media</b>	No restrictions



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<b>Specific Hazards Arising from the Chemical</b>	Hazardous decomposition products. The product is combustible but not readily ignited. Product's vapours do not propagate the flame. Gas/vapours combustion possible in presence of air in very particular conditions (see section 9 and/or consult the producer).
<b>Protection for Fire-fighters</b>	Evacuate personnel to safe areas. Intervention only by capable personnel who are trained and aware of the hazards of the product. In the event of fire, wear self-contained breathing apparatus. When intervention in close proximity wear acid resistant over suit. Clean contaminated surface thoroughly.

### SECTION 6 ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions and Protective Equipment</b>	Refer to protective measures listed in sections 7 and 8. Prevent further leakage or spillage if safe to do so. Keep away from open flames, hot surfaces and sources of ignition. Keep away from incompatible products. Isolate the area. Cover the spreading liquid with foam in order to slow down the evaporation. Ventilate the area.
<b>Environmental Precautions</b>	Prevent discharges into the environment (sewers, rivers, soils). Immediately notify the appropriate authorities in case of discharge.
<b>Method for Cleaning Up &amp; Containment</b>	If possible, dam large quantities of liquid with sand or earth. Collect the product with suitable means. Place everything into a closed, labeled container compatible with the product. Flush with plenty of water. Prevent product from entering drains. Treat recovered material as described in the section "Disposal considerations".
<b>Emergency Procedures</b>	Shut off leaks, if possible without personal risks. Remove all possible ignitions in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth or other appropriate barriers. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator.

### SECTION 7 HANDLING AND STORAGE

<p><b>Precautions for Safe Handling:</b> Use only in well-ventilated areas. Avoid contact with skin and eyes. Prevent product vapours decomposition from contacting hot spots. Prevent product vapours decomposition from electric arc action (welding). Preferably transfer by pump or gravity. Use only equipment and materials which are compatible with the product. Keep away from heat and sources of ignition. Keep away from incompatible products.</p>
<p><b>Conditions for Safe Storage:</b> Keep container dry. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.</p> <p>Storage temperature: Ambient Storage/Transport Pressure: Atmospheric</p>



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## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
Naphtha (Petroleum) hydrodesulfurized light, dearomatized	346ppm	Not Established	Not Established	Not Established
1,1-dichloro-1-fluoroethane	Not Established	Not Established	Not Established	Not Established

<b>Engineering Controls</b>	Ensure adequate ventilation. Provide appropriate exhaust ventilation at machinery. Refer to protective measures listed in sections 7 and 8. Apply technical measures to comply with the occupational exposure limits.
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### Personal Protective Equipment (PPE):

<b>Eye Protection</b>	Wear protective goggles for all industrial operations. If risk of splashing, chemical proof goggles/face shield.
<b>Skin Protection</b>	Apron/boots of neoprene if risk of splashing. For hand protection, use chemical resistant protective gloves such as Polyvinyl alcohol coated gloves.
<b>Respiratory Protection</b>	In the case of hazardous fumes, wear self contained breathing apparatus. Self-contained breathing apparatus in medium confinement/insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection
<b>Thermal hazards</b>	NA

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear
<b>Odour</b>	Solvent odour
<b>Odour Threshold</b>	NA
<b>pH</b>	NA
<b>Melting Point/ Freezing Point (°C)</b>	Not determined
<b>Initial boiling point and range (°C)</b>	Not determined
<b>Flash Point (°C) [According to ISO 3679, Closed Cup Testing]</b>	No flash point detected
<b>Evaporation Rate (BuAc=1)</b>	Not determined



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Flammability (solid, gas)	Non Flammable
Upper/lower Flammability (Explosive) Limits:	Not determined
Vapour Pressure	Not determined
Vapour Density	Not determined
Relative Density	1.12 ± 0.03
Solubility in water	Insoluble
Partition coefficient (N-Octanol/water)	Not determined
Auto-ignition Temperature (°C)	Not determined
Decomposition Temperature:	Not determined
Viscosity (mPa s)	Not determined

### SECTION 10 STABILITY AND REACTIVITY

Reactivity/Incompatible materials	Avoid contact with strong alkalis and acids, reactive earth metals, and strong oxidizers.
Chemical Stability	Stable at normal temperatures and storage conditions. Unstable at temperatures exceeding 207°F (97°C) or with flame contact. Contact with strong bases or alkaline materials may provoke violent reactions or explosions. Vapours are heavier than air and may spread along floors.
Possibility of hazardous reactions	Not determined
Hazardous decomposition products	Hydrogen fluoride, hydrochloric acid, Phosgene, Fluorophosgene
Conditions to avoid	Heat, flame, high-intensity heat sources.
Materials to avoid	Light and/or alkaline metals, strong bases, ferric chloride, some molecular sieves, Alkaline earth metals and powdered metals.

### SECTION 11 TOXICOLOGICAL INFORMATION

Ingredient Name: 1,1-Dichloro-1-fluoroethane
Effects on humans: <u>Eye contact</u> - Moderate eye irritation



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<p><u>Skin contact</u> - In case of repeated contact: dry and chapped skin, risk of chronic dermatitis.</p> <p><u>Inhalation</u> - At high concentrations, feelings of intoxication, restlessness, dizziness and drowsiness. - At high concentrations, risk of cardiac arrhythmia. - At high concentrations, risk of asphyxia by lack of oxygen.</p> <p><u>Ingestion</u> - No reported cases of intoxication in man.</p>
<p><b>Acute toxicity:</b> Acute oral toxicity- LD50, rat, &gt; 5,000 mg/kg Acute inhalation toxicity- LC50, 4 h, rat, 301mg/l Acute dermal toxicity- LD50, rat, &gt; 2,000 mg/kg</p>
<p><b>Skin corrosion/irritation:</b> Rabbit, non-irritant</p>
<p><b>Serious eye damage/irritation:</b> Rabbit, mild eye irritation</p>
<p><b>Respiratory organ or skin sensitisation:</b> Guinea pig. Did not cause sensitization on laboratory animals.</p>
<p><b>Carcinogenicity:</b> Not listed by ACGIH, IARC, NTP, or CA Prop 65</p>
<p><b>Specific target organ toxicity:</b> Inhalation, after a single exposure, dog, NOEL: <math>\geq 1</math> %, cardiac sensitization following adrenergic stimulation. Inhalation, Prolonged exposure, rat, Target Organs: testes, Central nervous system, NOEL: <math>\geq 0.024</math> g/l, observed effect, Remarks: Leydig cells/benign tumours</p>

<p><b>Ingredient Name:</b> Naphtha (Petroleum) hydrodesulfurized light, dearomatized</p>
<p><b>Effects on humans:</b> <u>Eye contact:</u> - Will cause eye discomfort, but will not injure eye tissue. <u>Skin contact:</u> - Low order of toxicity. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. <u>Inhalation:</u> - Vapour concentrations above recommended exposure levels may be irritating to the eyes and the respiratory tract, may cause headaches and dizziness, could be anesthetic and may have other central nervous system effects. <u>Ingestion:</u> - Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary edema. Minimal toxicity.</p>
<p><b>Acute toxicity:</b> Acute oral toxicity- LD50, Rat (oral): &gt;1700 mg/kg</p>
<p><b>Skin corrosion/irritation:</b> Cause skin irritant</p>
<p><b>Serious eye damage/irritation:</b> Cause eye irritant</p>
<p><b>Carcinogenicity:</b> Not listed by ACGIH, IARC, NTP, or CA Prop 65</p>



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## SECTION 12 ECOLOGICAL INFORMATION

<b>Toxicity</b>	<u>Acute ecotoxicity</u> Fishes, LC 50, 96 h, from 126 mg/l Daphnia magna, EC 50, 48 h, from 31 mg/l Algae, Selenastrum capricornutum, EC 50, 96 h, > 44 mg/l
<b>Persistence/Degradability</b>	<u>Abiotic degradation</u> Air, indirect photo-oxidation, $t_{1/2} = 7.9$ year(s) Conditions: sensitizer: OH radicals Air, photolysis, ODP = 0.11 Result: limited effect on stratospheric ozone Air, greenhouse effect, GWP = 0.12 Water/ Soil Result: non-significant hydrolysis <u>Biotic degradation</u> Aerobic, test ready biodegradability/MITI, degradation from 3 – 10 % (BOD), 28 day(s) Result: non-readily biodegradable Aerobic, test: biodegradation by methane oxidation, degradation = 100 %, 20 hour(s) Result: rapid and considerable biodegradation Conditions: inoculum: Methylosinus trichosporium OB3b
<b>Bio accumulative Potential</b>	Bioconcentration: log Po/w from 2.3 Result: weak bioaccumulation potential
<b>Mobility in soil</b>	Considerable volatility Water evaporation, $t_{1/2} = 3.2$ hour(s) Soil/sediments, adsorption, log KOC from 1.54 – 1.89

## SECTION 13 DISPOSAL CONSIDERATIONS

<u>Local legislation</u> Dispose in compliance with local/federal and national regulations. It is recommended to contact the producer for recycling/recovery. Or send the product to an authorized hazardous waste incinerator. The incinerator must be equipped with a system for the neutralization or recovery of HF.
<u>Container Disposal</u> To avoid treatments, as far as possible, use dedicated containers. If not, rinse the empty containers with a low volatility hydrocarbon and treat the effluent in the same way as waste. Containers that cannot be cleaned must be treated as waste.
<u>Empty Container Warning (where applicable):</u> Empty containers may retain residue and can be dangerous. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in





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accordance with governmental regulations.

## SECTION 14 TRANSPORT INFORMATION

### Land (ADR)

UN number	1950
UN Class	2.2
Subsidiary risk	NA
Packing Group	III
Proper shipping name	Aerosol, non-flammable
HIN	NA

### Sea (IMDG)

UN number	1950
UN Class	2.2
Subsidiary risk	NA
Packing Group	III
Proper shipping name	Aerosol, non-flammable
Marine pollutant	NA

### Sea (Annex II of MARPOL 73/78 and the IBC Code)

Pollution category	NA
Ship type	NA
Product name	NA

### Air (IATA)

UN number	1950
UN Class	2.2
Subsidiary risk	NA



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Packing Group	III
Proper shipping name	Aerosol, non-flammable

## Special precautions:

Before transportation, make sure the containers are tightly sealed and that there are no liquid or gas leaks.
When transporting containers, be sure that they are tightly fastened. An appropriate buffer material should be placed between them to prevent them from bumping each other and being damaged during transport.

## SECTION 15 REGULATORY INFORMATION

### EU Information

#### Risk Phrase:

R11	Highly flammable
R38	Irritating to skin
R50/53	Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R59	Dangerous for the ozone layer
R65	Harmful: may cause lung damage if swallowed
R67	Vapours may cause drowsiness and dizziness.

#### Safety Phrase:

S9	Keep container in a well-ventilated place
S16	Keep away from sources of ignition – No smoking
S23	Do not breathe gas/fumes/vapour/spray
S24	Avoid contact with skin
S33	Take precautionary measures against static discharges
S43A	In case of fire use sand, earth, chemical powder or foam.
S57	Use appropriate container to avoid environmental contamination.



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S59	Refer to manufacturer/supplier for information on recovery/recycling.
S60	This material and its container must be disposed of as hazardous waste
S61	Avoid release to the environment. Refer to special instructions/Safety data sheets
S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

## USA Information

### Comprehensive Environmental Response and Liability Act of 1980 (CERCLA)

<u>Ingredient</u>	<u>CAS #</u>	<u>CERCLA RQ</u>	<u>RCRA Code</u>
1,1-dichloro-1-fluoroethane	1717-00-6	-	-

### Superfund Amendments and Reauthorization Act (SARA) Title III Information:

#### SARA Section 311/312 (40 CFR 370) Hazard Categories:

<u>Ingredient</u>	<u>Acute Hazard</u>	<u>Chronic Hazard</u>	<u>Fire Hazard</u>	<u>Pressure Hazard</u>	<u>Reactivity Hazard</u>
1,1-dichloro-1-fluoroethane	Yes	Yes	No	No	No

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372): 1,1-dichloro-1-fluoroethane

## Canada Information

WHMIS classification: Unclassified

## SECTION 16 OTHER INFORMATION

Department issuing date sheet: Vance Chemicals Quality Control and Laboratory

Original Issue date: 1<sup>st</sup> January 2010

Issue date: N.A

Revision date: 10<sup>th</sup> March 2011

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