Safety Data Sheet

Issue Date: June 19, 2017 Revision Date: April 1, 2020 Version 2

SECTION 1: IDENTIFICATION

Product Identifier

Product Name DELTA®-LVC ADHESIVE

Intended Use of the Product

Liquid substrate adhesive for self-adhesive membranes

Name, Address, and Telephone of the Responsible Party

Dörken Systems Inc.
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Emergency Telephone Number

Company Number: (905)- 563-3255 CANUTEC (Canada):613-996-6666 CHEMTREC: 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

OSHA Regulatory Status This article This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation – Category 2
Serious eye damage/eye irritation – Category 2
Reproductive toxicity – Category 2
Specific target organ toxicity (single exposure) – Category 3
Specific target organ toxicity (repeated exposure) – Category 2
Flammable liquids – Category 2

Label Elements

Hazard Statements

Cause skin irritation
Causes serious eye irritation
Suspected of damaging fertility or the unborn child
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
Highly flammable liquid and vapor

Appearance: Viscous **Physical State:** liquid **Odor:** Strong Solvent

Precautionary Statements – Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed Ground/bond container and receiving equipment
Use explosion-proof electrical/ ventilating/ lighting/ equipment
Use only non-sparking tools

Take precautionary measures against static discharge
Keep cool

Precautionary Statements – Response

IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing If eye irritation persists: Get medical advice/attention
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
In case of fire: Use CO_2, dry chemical, or foam for extinction

Precautionary Statements – Response

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements – Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not Applicable

Unknown acute toxicity (GHS-US)

17.10458% of the mixture consists of ingredient(s) of unknown toxicity

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)
Methyl acetate	(CAS No) 79-20-9	30.00 – 60.00
Synthetic Polymer Blend	Proprietary	15.00 – 40.00
Hexane	(CAS No) 110-54-3	7.00 – 13.00
Benzene, 1-chloro-4-(trifluoromethyl)-	(CAS No) 98-56-6	7.00 – 13.00
Distillates, petroleum, hydrotreated heavy naphthenic	(CAS No) 64742-52-5	3.00 – 7.00
Cyclohexane	(CAS No) 110-82-7	1.00 – 5.00

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General: In case of accident or un-wellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.

Eye Contact: Keep eye wide open while rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.

Skin Contact: Wash immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. Wash contaminated clothing before reuse.

Inhalation: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician.

Ingestion: Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Rinse mouth. Never give anything by mouth to an unconscious person.

Self-protection: Use personal protective equipment as required.

Most Important Symptoms and Effects Both Acute and Delayed

May cause redness and tearing of the eyes. Coughing and/ or wheezing. May cause skin irritation. Drowsiness. Dizziness.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Keep victim warm and quiet. Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO2, sand, earth, water spray or regular foam.

Unsuitable: Do not use a solid water stream as it may scatter and spread fire.

Special Hazards Arising From the Substance or Mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

Explosion data

Reactivity: Hazardous reactions will not occur under normal conditions.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Remove wall sources of ignition. Ensure adequate ventilation, especially in confined areas.

Environmental Precautions: Collect spillage. Dispose of contents/container to an approved waste disposal plant. Prevent entry into waterways, sewers, basements or confined areas.

Methods and Materials for Containment and Cleaning Up

For Containment: A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-cobustible material and trasfer to containers.

Methods for Cleaning Up: Use clean non-sparking tools to collect absorbed material. Dike far ahead of liquid spill for later disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Advice of Safe Handling: Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Storage Conditions: Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatible materials: Strong acids. Strong oxidizing agents. Strong bases.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl acetate (CAS No) 79-20-9	STEL: 250 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 610 mg/m³	IDLH: 3100 ppm TWA: 200 ppm TWA: 610 mg/m³ STEL: 250 ppm STEL: 760 mg/m³
Hexane (CAS No) 110-54-3	STEL: 50 ppm	TWA: 500 ppm TWA: 1800 mg/m³	IDLH: 1100 ppm TWA: 50 ppm TWA: 180 mg/m³
Benzene, 1-chloro-r-(trifluoromethyl) (CAS No) 98-56-6	TWA: 2.5 mg/m³ F	TWA: 2.5 mg/m³ F TWA: 2.5 mg/m³ dust	
Cyclohexane (CAS No) 110-82-7	TWA: 100 ppm	TWA: 300 ppm TWA: 1050 mg/m³	IDLH: 1300 ppm TWA: 300 ppm TWA: 1050 mg/m³

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.

Other Information: When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clathing is recommended.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	liquid
Appearance	:	Viscous blue
Odor	:	Strong Solvent
Odor Threshold	:	Not available
pH	:	Not available
Evaporation Rate	:	>1
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	>56˚C / 133˚F
Flash Point	:	-23˚C / -9˚F
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available

Lower Flammable Limit	:	1.2
Upper Flammable Limit	:	16
Vapor Pressure	:	33 kPa @25˚C
Relative Vapor Density at 20°C	:	Not available
Relative Density	:	Not available
Specific Gravity / Density	:	0.92
Specific Gravity	:	Not available
Solubility	:	Not available
Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	Not available
Explosion Data - Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data - Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Not available
Chemical Stability:	Stable under recommended handling and storage conditions.
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur under normal processing.
Conditions to Avoid:	Direct sunlight, extremely high temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition.
Incompatible Materials:	Strong acids, strong bases, strong oxidizers.
Hazardous Decomposition Products:	Thermal decomposition can lead to release of irritating and toxic gasses and vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects – Product

Skin Corrosion/Irritation:	Irritating to skin
Serious Eye Damage/Irritation:	Irritating to eyes
Respiratory or Skin Sensitization:	May cause drowsiness or dizziness
Ingestion:	Ingestion may cause adverse effects

Chemical Name	Oral LD50	Dermal LD50	Inhaltion LC50
Methyl acetate (CAS No) 79-20-9	>5 g/kg (Rat)	>5 g/kg (Rabbit)	= 16000 ppm (Rat) 4 h
Haxane (CAS No) 110-54-3	= 25 g/kd (Rat)	= 3000 mg/kg (Rabbit)	= 4800 ppm (Rat) 4 h
Benzene, 1-chloro-4-(trifluoromethyl)- (CAS No) 98-56-6	= 13 g/kg (Rat)	>2 ml/kg (Rabbit)	= 33 mg/L (Rat) 4 h
Cyclohexane (CAS No) 110-82-7	= 12705 mg/kg (Rat)	>2000 mg/kg (Rabit)	= 13.9 mg/L (Rat) 4 h

Information on toxicological effects

Syptoms: May cause redness and tearing of the eyes. Vapors may cause drowsiness and dizziness. Coughing and/ or wheezing. May cause skin irritaiton.

Delayed and immediate affects as well as chronic effects from short and long-term exposure

Sensitization:	Not available
Germ cell mutagenicity:	Not available
Carcinogenigity:	The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. This note applies only to cetarin complex oil derived substances. The table below indicates whether each agence has listed any ingredents as carcinogen.

Chamical Name	ACGIH	IARC	NTP	OSHA
Distillates, petroleum, hydrotreated heavy naphthenic 64742-52-5	A2	Group 1	-	X

ACGIH – American Conference of Govermental Industiral Hygienists
A2 – Suspected Human Carcinogen
IARC – International Agency for Research on Cancer
Group 1 – Carcinogenic to Humans
OSHA – Occupational Safty and Health Administraion
X – Present

Reproductive toxisicty: Contains a known or suspected reproductive toxin.
STOT – single exposure: Target organs. Respiratory ststem. Cntral nervouse system.
STOT – repeated exposrure: Causes damage to organs throguh prolonged or repeated exposure.
Chroinic toxicity: Avoid repeated exposure.
Target Organ Effects: Central nervouse system, eyes, peripheral nervouse System, respiratory system, skin.
Neruoligical effects: Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.
Aspiration hazard: Not available

Numerical measures of toxicity – Product Information
ATEmix (oral) – 13.438.00 mg/kg
ATEmix (dermal) – 4.994.00 mg/kg
ATEmix (inhaltion-dust/mist) – 376.70 mg/l
ATEmix (inhaltion-vapor) – 84.964.00 mg/l

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Toxic to aquatic life with long lasing effects. 17.10819% of the mixture consist of components of unknown to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Methyl acetate (CAS No) 79-20-9	120: 72h desmodesmus subspicatus mg/L EC 50	295 – 348: 96H Pimephales promelas mg/L LC 50 flow-through 250 -350 : 96 h Brachydanio rerio mg/L LC50 static	1026.7:48 h Daphnia magna mg/L EC 50
Hexane (CAS No) 110-54-3	-	2.1 – 2.98: 96 h Pimephales promelas mg/L LC 50 flow-through	1000: 24 h Daphnia magna mg/L EC 50
Benzene, 1-chloro-4-(trifluoromethyl)- (CAS N0) 98-56-6	-	11.5 – 15.8: 48 h Lepomis macruchirus mg/L LC50 static	3.68: 48 h Daphnia magna mg/L EC 50
Distillates, petroleum, hydrotreated heavy naphthenic (CAS No) 64742-52-5	-	5000: 96 h Oncorhynchus mykiss mg/L LC50	1000: 48 h Daphnia magna mg/L EC 50
Cyclohevane (CAS No) 110-82-7	-	3.96 – 5.18: 96 h Pimephales promelas mg/L LC 50 flow-through 23.03 – 42.07: 96h Pimephales promelas mg/L LC 50 static	400: 24h Daphnia magna mg/L EC 50

		24.99-44-96: 96h Lepomis macrochirus mg/L LC50 static 48.87 – 68.76: 96h Poecillia reticulate mg/L LC50 static	

Persistance and degradability: Not available

Bioaccumulation:

Chemical Name	Partition coefficient
Methyl acetate (CAS No) 79-20-9	0.18
Benzene, 1-chloro-4-(trifluoromethyl)- (CAS N0) 98-56-6	3.7
Cyclohevane (CAS No) 110-82-7	3.44

Other Adverse Effects: Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: This material, as supplied, is a hazardous waste according to federal regualtio (40 CFR 261)

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions. Do not reuse container.

Ecology - Waste Materials: Avoid release to the environment.

US EPA Waste Number: D001

This product contains one or more substances that are listed with the state of California as hazardous waste.

Chemical Name	Partition coefficient
Methyl acetate (CAS No) 79-20-9	Toxic/Ignitable
Haxane (CAS No) 110-54-3	Toxic/Ignitable
Cyclohevane (CAS No) 110-82-7	Toxic/Ignitable

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT:

Class: 3
UN Number: 1133
Packaging group: II
Hazard label: 3
Description of goods: Adhesive

In Accordance with IMDG:

Class: 3
UN Number: 1133
Label: 3
Packaging group: II
EMS Number: F-E,S-D
Marine pollutant: This product contains a chamical which is listed as a marine pollutant.
Desctipiton of goods: Adhesive

In Accordance with IATA:

Class:	3
UN Number:	1133
Label:	3
Packaging group:	II
Desctipiton of goods:	Adhesive

In Accordance with TDG:

Class:	3
UN Number:	1133
Label:	3
Packaging group:	II
Desctipiton of goods:	Adhesive

SECTION 15: REGULATORY INFORMATION

International Inventories

TSCA – Complies
DSL/NDSL – Complies
EINECS/ELINCS – Complies

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulation, Part 372.

Chemical Name	SARA 313 – Threshold Values %
Haxane (CAS No) 110-54-3	1.0
Cyclohexane (CAS No) 110-82-7	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard – YES
Chronic Health Hazard – YES
Fire Hazard – YES
Sudden Release of pressure hazard – NO
Reactive Hazard – NO

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA – Reportable Quantitates	CWA – Toxic Pollutants	CWA – Priority Pollutants	CWA – Hazardous Substances
Cyclohexane (CAS No) 110-82-7	1000 lb	-	-	X

CERCLA

This material, as supplied, contains on or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substance RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hexane (CAS No) 110-54-3	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Cyclohexane (CAS No) 110-82-7	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65 – This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Methyl acetate (CAS No) 79-20-9	X	X	X
Hexane (CAS No) 110-54-3	X	X	X
Benzene, 1-chloro-4-(trifluoromethyl)-(CAS No) 95-56-6	X	X	X
Cyclohexane (CAS No) 110-82-7	X	X	X

Canadian Regulations

Methyl Acetate (CAS No 1760-24-3)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B – Eye irritaiton, toxic effects
Hexane (CAS No) 110-54-3	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision A – chronic toxicity, very toxic
Benzene, 1-chloro-4-(trifluoromethyl)-(CAS No) 95-56-6	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Not listed
Cyclohexane (CAS No) 110-82-7	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B – skin irritaiton, toxic effects

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Preparation Date: June 19, 2017

Revision Date: April 1, 2020

Party Responsible For The Preparation of This Document

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