155-006

Kleen-Solv

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 12/19/2016 Revision date: 12/19/2016 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form : Substance

Substance name : Kleen-Solv

Product code : 116/117

1.2. Recommended use and restrictions on use

Recommended use : Parts washing solvent

1.3. Supplier

Manufacturer
Kleen-Flo Tumbler Industries Ltd.
75 Advance Blvd.
L6T 4N1 Brampton - Canada
T (905) 793-4311

1.4. Emergency telephone number

Emergency number : CANUTEC 613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Flam. Liq. 3	H226
Skin Irrit. 2	H315
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
Asp. Tox. 1	H304

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms (GHS-CA) :

GHS02 GHS07 GHS08

Signal word (GHS-CA) : Danger

Hazard statements (GHS-CA) : H226 - Flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer
H361 - Suspected of damaging fertility or the unborn child

Precautionary statements (GHS-CA) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, ventilating, lighting equipment
P242 - Use only non-sparking tools
P243 - Take action to prevent static discharges
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P264 - Wash hands, forearms and face thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308+P313 - IF exposed or concerned: Get medical advice/attention
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water
P362+P364 - Take off contaminated clothing and wash it before reuse
P332+P313 - If skin irritation occurs: Get medical advice/attention
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P331 - Do NOT induce vomiting
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-CA)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Kleen-Solv

Name	Product identifier	%
Stoddard solvent	(CAS No) 8052-41-3	80-100

Hazardous constituents contained in substance

*Nonane	(CAS No) 111-84-2	< 5
*Benzene, 1,2,4-trimethyl-	(CAS No) 95-63-6	< 5
*Xylenes (o-, m-, p- isomers)	(CAS No) 1330-20-7	0.9
*Ethylbenzene	(CAS No) 100-41-4	0.5
*Naphthalene	(CAS No) 91-20-3	0.5

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash clothing before re-using. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : 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.

First-aid measures after ingestion : IF SWALLOWED: immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/injuries after inhalation : May cause irritation to the respiratory tract. May cause drowsiness or dizziness.

Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. May result in aspiration into the lungs, causing chemical pneumonia. May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water fog. Foam. Dry chemical. Carbon dioxide.

5.2. Unsuitable extinguishing media

Unsuitable extinguishing media : Do not use water jet.

5.3. Specific hazards arising from the hazardous product

Fire hazard : Flammable liquid and vapour. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours. Products of combustion may include, and are not limited to: oxides of carbon.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.4. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to cool exposed surfaces.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Use special care to avoid static electric charges. Remove all sources of ignition. Use only non-sparking tools.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition - No smoking. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Handle and open container with care. When using do not eat, drink or smoke. Use explosion-proof equipment. Use non-sparking tools. Take precautionary measures against static discharge.

Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep container tightly closed and in well ventilated place. Keep out of the reach of children. Store locked up. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Stoddard solvent (8052-41-3)		
USA - ACGIH	ACGIH TWA (ppm)	100 ppm

Ethylbenzene (100-41-4)		
USA - ACGIH	ACGIH TWA (ppm)	20 ppm

Naphthalene (91-20-3)		
USA - ACGIH	ACGIH TWA (ppm)	10 ppm

Nonane (111-84-2)		
USA - ACGIH	ACGIH TWA (ppm)	200 ppm

Xylenes (o-, m-, p- isomers) (1330-20-7)		
USA - ACGIH	ACGIH TWA (ppm)	100 ppm
USA - ACGIH	ACGIH STEL (ppm)	150 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration

Eye protection:

Safety glasses or goggles are recommended when using product.

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other Information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear
Colour	: Colourless
Odour	: petroleum-like odour
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: 0.14
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: -76 °C
Boiling point	: 159 - 195 °C
Flash point	: 43 °C (ASTM D-56)
Auto-ignition temperature	: 260 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour
Vapour pressure	: 0.285 kPa (20°C)
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.788 (15 °C)
Density	: No data available
Solubility	: Negligible in water
Partition coefficient n-octanol/water	: No data available
Viscosity, kinematic	: 1.21 cSt (25 °C)
Explosive limits	: Lower explosive limit (LEL): 0.8 vol % Upper explosive limit (UEL): 5.6 vol %

9.2. Other information

VOC content	: 6.593 lbs/gal

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	: No dangerous reactions known under normal conditions of use.
Chemical stability	: Stable under normal conditions. May form flammable/explosive vapour-air mixture.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Heat. Incompatible materials. Sources of ignition. Direct sunlight.
Incompatible materials	: Strong oxidizers.
Hazardous decomposition products	: May include, and are not limited to: oxides of carbon. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.

Kleen-Solve	
LD50 oral rat	> 2000 mg/kg (Calculated acute toxicity estimate)
LD50 dermal rabbit	> 2000 mg/kg (Calculated acute toxicity estimate)
LC50 inhalation rat	> 20 mg/l/4h (Calculated acute toxicity estimate)

Ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg

Ethylbenzene (100-41-4)	
LD50 dermal rabbit	15400 mg/kg
LC50 inhalation rat	17.4 mg/l/4h

Naphthalene (91-20-3)	
LD50 oral rat	1110 mg/kg
LD50 dermal rabbit	1120 mg/kg
LC50 inhalation rat	> 340 mg/m³ (Exposure time: 1 h)

Nonane (111-84-2)	
LC50 inhalation rat	3200 ppm/4h

Benzene, 1,2,4-trimethyl- (95-63-6)	
LD50 oral rat	3280 mg/kg
LD50 dermal rabbit	> 3160 mg/kg
LC50 inhalation rat	18 g/m³ (Exposure time: 4 h)

Xylenes (o-, m-, p- isomers) (1330-20-7)	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	> 4350 mg/kg
LC50 inhalation rat	29.08 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified.
Respiratory or skin sensitization : Not classified.
Germ cell mutagenicity : Not classified.
Carcinogenicity : Suspected of causing cancer.

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : May cause drowsiness or dizziness.
STOT-repeated exposure : Not classified.
Aspiration hazard : May be fatal if swallowed and enters airways.

Kleen-Solv	
Viscosity, kinematic (calculated value)	1.21 mm²/s (25 °C)

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.
Symptoms/injuries after inhalation : May cause irritation to the respiratory tract. May cause drowsiness or dizziness.
Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. May result in aspiration into the lungs, causing chemical pneumonia. May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Ethylbenzene (100-41-4)	
LC50 fish 1	11.0 - 18.0 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
LC50 fish 2	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])
EC50 Daphnia 1	1.8 - 2.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Naphthalene (91-20-3)	
LC50 fish 1	5.74 - 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	1.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 1	2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Daphnia 2	1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])

Benzene, 1,2,4-trimethyl- (95-63-6)	
LC50 fish 1	7.19 - 8.28 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	6.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Xylenes (o-, m-, p- isomers) (1330-20-7)	
LC50 fish 1	13.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

Xylenes (o-, m-, p- isomers) (1330-20-7)	
LC50 fish 2	2.661 - 4.093 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	3.82 mg/l (Exposure time: 48 h - Species: water flea)
EC50 Daphnia 2	0.6 mg/l (Exposure time: 48 h - Species: Gammarus lacustris)

12.2. Persistence and degradability

Kleen-Solv	
Persistence and degradability	Inherently biodegradable.

12.3. Bioaccumulative potential

Kleen-Solv	
Bioaccumulative potential	Not established.
Ethylbenzene (100-41-4)	
BCF fish 1	15
Partition coefficient n-octanol/water	3.2
Naphthalene (91-20-3)	
BCF fish 1	30 - 430
Partition coefficient n-octanol/water	3.6
Benzene, 1,2,4-trimethyl- (95-63-6)	
Partition coefficient n-octanol/water	3.63
Xylenes (o-, m-, p- isomers) (1330-20-7)	
BCF fish 1	0.6 - 15
Partition coefficient n-octanol/water	2.77 - 3.15

12.4. Mobility in soil

Ethylbenzene (100-41-4)	
Partition coefficient n-octanol/water	3.2
Naphthalene (91-20-3)	
Partition coefficient n-octanol/water	3.6
Benzene, 1,2,4-trimethyl- (95-63-6)	
Partition coefficient n-octanol/water	3.63
Xylenes (o-, m-, p- isomers) (1330-20-7)	
Partition coefficient n-octanol/water	2.77 - 3.15

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

Transportation of Dangerous Goods

Not regulated for transport, Exempted under section 1.33 of the TDG.

14.2. Transport information/DOT

No additional information available

14.3. Air and sea transport

No additional information available

SECTION 15: Regulatory information

15.1. National regulations

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. International regulations

No additional information available

SECTION 16: Other information

Date of issue	: 12/19/2016
Revision date	: 12/19/2016
Other information	: None.
Prepared by	: Kleen-Flo Tumbler Ind. Ltd.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.