



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: Valve-Kleen™ Engine Valve & Lifter Cleaner

Product Number (s): 75331

Product Use: Engine valve and lifter cleaner

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300(General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Flammable. Harmful or Fatal if Swallowed. Vapor Harmful.
Appearance & Odor: Light yellow liquid, solvent odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause mild eye irritation including stinging, tearing, redness and possibly blurred vision.

SKIN: May cause skin irritation including redness and burning. Prolonged or repeated contact may cause drying and cracking of the skin, or burns and other skin damage. Passage of this material into the body through the skin is possible, but not likely to cause harmful effects during safe handling and use.

INHALATION: Breathing small amounts during normal handling is not likely to cause harmful effects. Breathing larger amounts may cause throat irritation and may lead to central nervous system effects. Symptoms include giddiness, dizziness, drowsiness, nausea, headache, and shortness of breath. Continued exposure could lead to unconsciousness and possibly coma.

INGESTION: Swallowing small amounts is not likely to be harmful, but may cause feelings of nausea. Larger amounts may be harmful as this material can be aspirated into the lungs during swallowing or vomiting. This can lead to lung inflammation and other lung injury.

CHRONIC EFFECTS: Ethylbenzene has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain.

TARGET ORGANS: kidney, liver, central nervous system; may cause irregular heartbeats.

Medical Conditions Aggravated by Exposure: respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Product Name: Valve-Kleen™ Engine Valve & Lifter Cleaner

Product Number (s): 75331

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Xylene	1330-20-7	45 – 55
Solvent-refined heavy paraffinic distillates	64741-88-4	35 – 45
Ethylbenzene	100-41-4	10 – 15
Acetone	67-64-1	< 1

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Seek immediate medical attention. Do NOT induce vomiting. If individual is drowsy or unconscious, place individual on the left side with the head down.

Note to Physicians: Inhalation of high concentrations of this material may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.

Section 5: Fire-Fighting Measures

Flammable Properties: As defined by OSHA, this product is a Class IC Flammable Liquid.

Flash Point: 82°F / 28°C (TCC) Upper Explosive Limit: 6.6
Autoignition Temperature: 980°F / 527°C Lower Explosive Limit: 1.0

Fire and Explosion Data:

Suitable Extinguishing Media: Class B fire extinguishers; carbon dioxide, dry chemical, regular foam

Products of Combustion: Oxides of carbon, various hydrocarbons

Explosion Hazards: Containers, when exposed to heat from fire, may build pressure and rupture. Vapors may accumulate in a confined space and create a flammable atmosphere.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8. Avoid inhaling vapors.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Product Name: Valve-Kleen™ Engine Valve & Lifter Cleaner

Product Number (s): 75331

Methods for Containment & Clean-up: Eliminate all sources of ignition. Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Do not use near sparks, open flames or other sources of ignition. Use proper ventilation to minimize accumulation of vapors. If ventilation is not available, respiratory protection should be used (See Section 8). Wash hands after use and before contacting food. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Keep containers closed when not in use. Do not store near sources of ignition. Keep out of reach of children.

Aerosol Storage Level: NA

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Xylene	100	NE	100	150	NE		ppm
Solvent-refined heavy paraffinic distillates	5*	NE	5*	10*	NE		mg/m ³
Ethylbenzene	100	NE	100	125	NE		ppm
Acetone	1000	NE	500	750	NE		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated * – oil mist							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as neoprene or nitrile. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Product Name: Valve-Kleen™ Engine Valve & Lifter Cleaner**Product Number (s): 75331**

Physical State: liquid
 Color: yellow
 Odor: solvent
 Odor Threshold: ND
 Specific Gravity: 0.8655
 Initial Boiling Point: 279°F / 137°C
 Freezing Point: ND
 Vapor Pressure: ND
 Vapor Density: > 1 (air = 1)
 Evaporation Rate: fast
 Solubility: negligible in water
 Coefficient of water/oil distribution: ND
 pH: NA
 Volatile Organic Compounds: wt %: 60.4 g/L: 522.8 lbs./gal: 4.35

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Sources of ignition, temperature extremes

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Oxides of carbon; various hydrocarbons

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Xylene	4300 mg/kg	> 1700 mg/kg	5000 ppm/4H
Solvent-refined heavy paraffinic distillates	No data	No data	No data
Ethylbenzene	3500 mg/kg	> 5000 mg/kg	55,000 mg/m ³ /2H
Acetone	5800 mg/kg	No data	50,100 mg/m ³ /8H

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Xylene	No	No	No	E (mild) / S (moderate)	Unknown
Solvent-refined heavy paraffinic distillates	No	No	No	E & S (mild)	Unknown
Ethylbenzene	No	Group 2B	No	E (moderate) / S (mild)	Unknown
Acetone	No	No	No	E & S (moderate) / R (mild)	Yes

E – Eye	S – Skin	R - Respiratory
---------	----------	-----------------

Product Name: Valve-Kleen™ Engine Valve & Lifter Cleaner

Product Number (s): 75331

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available
Other: Paraffinic distillates: Product testing using IP 346 shows a DMSO PAH content of < 3% by weight.

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: Xylene – 96Hr LC50 Oncorhynchus mykiss: 13500 – 17300 ug/L
24Hr LC50 Daphnia magna: 150 mg/L
Ethylbenzene – 96Hr LC50 Pimephales promelas: 12.1 mg/L (flow-through)
48Hr LC50 Daphnia magna: 75 mg/L
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: This product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001. (See 40 CFR Part 261.20 – 261.33)
Empty containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): UN1993, Flammable liquids, N.O.S. (xylene, ethylbenzene), 3, PGIII, Limited Quantity**
ICAO/IATA (air): UN1993, Flammable liquids, N.O.S. (xylene, ethylbenzene), 3, PGIII, Limited Quantity
IMO/IMDG (water): UN1993, Flammable liquids, N.O.S. (xylene, ethylbenzene), 3, PGIII, Limited Quantity
Special Provisions: **This product can be classified and labeled as 'Consumer Commodity, ORM-D' for domestic ground shipping.

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: Xylene (100 lbs), Ethylbenzene (1000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Product Name: Valve-Kleen™ Engine Valve & Lifter Cleaner
Product Number (s): 75331

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	Yes
Reactive Hazard	No
Release of Pressure	No
Acute Health Hazard	Yes
Chronic Health Hazard	Yes

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
Xylene (< 50%), Ethylbenzene (12%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): Xylene, Ethylbenzene

Occupational Safety and Health Administration:

This product is regulated by the Hazard Communications Standard.

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulation and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: B2, D2A, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

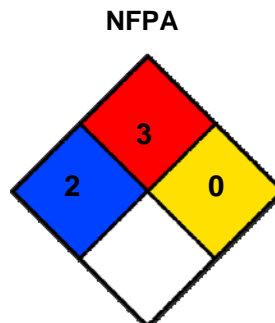
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	2
Flammability:	3
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 601A
Revision Date: 05/26/2015

Changes since last revision: Removed Product Number
Section 15: Regulatory Information

Product Name: Valve-Kleen™ Engine Valve & Lifter Cleaner

Product Number (s): 75331

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. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists	NA: Not Applicable
CAS: Chemical Abstract Service	ND: Not Determined
CFR: Code of Federal Regulations	NIOSH: National Institute of Occupational Safety & Health
DOT: Department of Transportation	NFPA: National Fire Protection Association
DSL: Domestic Substance List	NTP: National Toxicology Program
g/L: grams per Liter	OSHA: Occupational Safety and Health Administration
HMIS: Hazardous Materials Identification System	PMCC: Pensky-Martens Closed Cup
IARC: International Agency for Research on Cancer	PPE: Personal Protection Equipment
IATA: International Air Transport Association	ppm: Parts per Million
ICAO: International Civil Aviation Organization	RoHS: Restriction of Hazardous Substances
IMDG: International Maritime Dangerous Goods	STEL: Short Term Exposure Limit
IMO: International Maritime Organization	TCC: Tag Closed Cup
lbs./gal: pounds per gallon	TWA: Time Weighted Average
LC: Lethal Concentration	WHMIS: Workplace Hazardous Materials Information System
LD: Lethal Dose	