



Pennzoil Products Company  
a subsidiary of Pennzoil Company

# MATERIAL SAFETY DATA SHEET



## 1. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME PENNZOIL CO., GUMOUT DIVISION

CAS NUMBER: MIXTURE

MSDS CODE: 000951

ADDRESS

P.O. BOX 2967

HOUSTON, TX 77252-2967

EMERGENCY TELEPHONE NO. (800) 546-6040

NFPA HAZARD IDENTIFICATION

DEGREE OF HAZARD

HAZARD RATINGS

HEALTH: 2

0-LEAST

FIRE: 3

1-SLIGHT

REACTIVITY: 0

2-MODERATE

3-HIGH

4-EXTREME

TRADE NAME: JET SPRAY, GUMOUT<sup>®</sup> CARBURETOR AND CHOKE CLEANER

SYNONYMS: STOCK #7450, STOCK #7440, STOCK #7460, JET SPRAY

BY: ENVIRONMENTAL, SAFETY & HEALTH  
(800) 546-6227

EFFECTIVE DATE: APRIL 15, 1998  
SUPERSEDES DATE: AUGUST 20, 1997

## 2. INGREDIENTS

COMPONENT NAME CAS NUMBER	HAZARDOUS IN BLEND	PERCENTAGE			COMPONENT			UNIT
		MIN		MAX	EXPOSURE LIMIT			
-----								
LIGHT AROMATIC SOLVENT NAPHTHA 64742-95-6	YES	30	TO	50	OSHA PEL ACGIH TLV	TWA TWA	500 300	PPM PPM
HYDROTREATED LIGHT DISTILLATE 64742-47-8	NO	10	TO	30	OSHA PEL ACGIH TLV			NO LIMIT NO LIMIT
METHYL ETHYL KETONE 78-93-3	YES	1	TO	7	OSHA PEL ACGIH TLV ACGIH TLV	TWA TWA STEL	200 200 300	PPM PPM PPM
ISOPROPYL ALCOHOL 67-63-0	YES	1	TO	7	OSHA PEL ACGIH TLV ACGIH TLV	TWA TWA STEL	400 400 500	PPM PPM PPM
PROPANE								

74-98-6	YES	15	TO 25	OSHA PEL ACGIH TLV	TWA 1000	PPM NO LIMIT
SURFACTANTS MIXTURE	NO	<	1	OSHA PEL ACGIH TLV		NO LIMIT NO LIMIT

### 3. HEALTH INFORMATION AND PROTECTION

**EYE CONTACT:** AVOID EYE CONTACT. THIS PRODUCT CAN CAUSE CORNEAL BURNS, TWITCHING AND REDNESS. THESE EFFECTS ARE TRANSIENT, AND COMPLETE RECOVERY FOLLOWS.

**SKIN CONTACT:** AVOID SKIN CONTACT. THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON DIRECT CONTACT. PROLONGED OR REPEATED CONTACT MAY RESULT IN CONTACT DERMATITIS WHICH IS CHARACTERIZED BY DRYNESS, CHAPPING, AND REDDENING. THIS CONDITION MAY MAKE THE SKIN MORE SUSCEPTIBLE TO OTHER IRRITANTS, SENSITIZERS, AND DISEASE. PRE-EXISTING SKIN CONDITIONS MAY MAKE THE SKIN MORE SUSCEPTIBLE AND FACILITATE UPTAKE BY THIS ROUTE.

**INHALATION:** AVOID PROLONGED INHALATION OF VAPORS. EXPOSURE TO VAPORS MAY BE IRRITATING TO THE THROAT AND LUNGS. WHEN HIGH CONCENTRATIONS ARE INHALED, HUMAN SIGNS MAY INCLUDE A REDDENING OF THE FACE AND A FEELING OF INCREASED BODY HEAT. IN ADDITION, DISTURBED VISION, DIZZINESS, TREMORS, SALIVATION, CARDIAC STRESS, DROWSINESS, DULLNESS, NUMBNESS, WEAKNESS, HEADACHE, NAUSEA, AND CONFUSION, AS WELL AS RESPIRATORY DIFFICULTIES MAY BE APPARENT. EXTREMELY HIGH CONCENTRATIONS HAVE ANAESTHETIC EFFECTS AND MAY LEAD TO DEATH. SIGNS AND SYMPTOMS FROM CHRONIC EXPOSURE RESEMBLE THOSE FROM ACUTE MISHAPS BUT ARE IN PART SYSTEMICALLY MORE SEVERE. SYMPTOMS RELATED TO THE NERVOUS SYSTEM, KIDNEYS, LIVER, HAVE BEEN REPORTED FOLLOWING LONG-TERM INHALATION EXPOSURE TO HIGH CONCENTRATIONS. SEE HEALTH DATA SECTION BELOW.

**INGESTION:** THERE ARE NO KNOWN ADVERSE EFFECTS BASED ON CURRENT REFERENCES. INGESTION OF SMALL QUANTITIES IS USUALLY NONFATAL UNLESS ASPIRATION OCCURS. ASPIRATION MAY LEAD TO CHEMICAL PNEUMONITIS WHICH IS CHARACTERIZED BY PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATORY RATE, INCREASED HEART RATE, AND A BLUISH DISCOLORATION OF THE SKIN. COUGHING, CHOKING, AND GAGGING ARE OFTEN NOTED AT THE TIME OF ASPIRATION. GASTROINTESTINAL DISCOMFORT MAY DEVELOP, FOLLOWED BY VOMITTING WITH A FURTHER RISK OF ASPIRATION. INGESTION WILL CAUSE SEVERE GASTROINTESTINAL DISTRESS. SEVERE ORAL INTOXICATION WILL LEAD TO INTENSE BURNING OF THE THROAT AND MAY RESULT IN DROWSINESS, DULLNESS, NUMBNESS, AND HEADACHE FOLLOWED BY DIZZINESS, WEAKNESS, AND NAUSEA. LOSS OF CONSCIOUSNESS AND CONVULSIONS FOLLOWED BY DEATH MAY RESULT.

**HEALTH DATA:** POTENTIALLY FATAL VAPOR CONCENTRATIONS ARE OF LEVELS APPROXIMATELY 100 FOLD THE EXPOSURE LIMITS. SUCH CONCENTRATIONS CAN ONLY BE BUILT UP IN UNVENTILATED, ENCLOSED AND CONFINED SPACES. THIS PRODUCT CONTAINS PETROLEUM NAPHTHAS AND ISOPROPYL ALCOHOL. THESE PETROLEUM NAPHTHAS AND/OR SOLVENTS ARE A COMPLEX BLEND OF LIGHT PETROLEUM DISTILLATES. SOME OF THE COMPONENTS OF THESE BLENDS ARE CONSIDERED UNIQUELY TOXIC AT HIGH CONCENTRATIONS, SUCH AS BENZENE (BONE MARROW DISORDERS INCLUDING LEUKEMIA AND ANEMIA), AND N-HEXANE (PERIPHERAL NEUROPATHY). AT THE LOW CONCENTRATIONS AT WHICH THEY ARE PRESENT IN THIS BLEND HOWEVER, AND AT THE LOW EXPOSURE LEVELS AT WHICH THEY ARE ENCOUNTERED AS VAPORS, THESE COMPONENTS DO NOT PRESENT A SIGNIFICANT RISK. LIGHT HYDROCARBONS SUCH AS STODDARD SOLVENT, VM & P NAPHTHA AND C10-C11 ISOPARAFFIN PRODUCED KIDNEY

DAMAGE IN MALE RATS ONLY BUT NOT IN FEMALE RATS OR MICE. VARIOUS NAPHTHAS TESTED WERE NOT CARCINOGENIC IN MOUSE SKIN PAINTING BIO-ASSAYS. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT PETROLEUM SOLVENTS ARE GROUP 3 SUBSTANCES, "NOT CLASSIFIABLE AS TO THEIR CARCINOGENICITY TO HUMANS." THIS PRODUCT IS NOT CARCINOGENIC ACCORDING TO THE OSHA HAZARD COMMUNICATION STANDARD.

## 4. EMERGENCY & FIRST AID PROCEDURES

- EYE CONTACT:** IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER AND CONTINUE FLUSHING FOR 15 MINUTES UNTIL IRRITATION SUBSIDES. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.
- SKIN CONTACT:** WASH CONTAMINATED AREA THOROUGHLY WITH SOAP AND WATER. USE A HAND OR SKIN LOTION TO PREVENT DRYNESS. IF REDNESS OR IRRITATION OCCURS, SEEK MEDICAL ATTENTION.
- INHALATION:** IF EXPOSURE LEVELS EXCEED THE LIMITS LISTED IN SECTION II OR III, REMOVE VICTIM FROM EXPOSURE. IF VICTIM EXHIBITS SIGNS OF VAPOR INTOXICATION REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED OR IS IRREGULAR, ADMINISTER ARTIFICIAL RESPIRATION AND SUPPLY OXYGEN IF IT IS AVAILABLE. IF VICTIM IS UNCONSCIOUS, REMOVE TO FRESH AIR AND SEEK MEDICAL ATTENTION.
- INGESTION:** DO NOT INDUCE VOMITING DUE TO ASPIRATION HAZARD. IF VOMITING OCCURS LOWER HEAD BELOW KNEES TO AVOID ASPIRATION. SEEK MEDICAL ATTENTION.

## 5. PERSONAL HEALTH PROTECTION INFORMATION

- EYE PROTECTION:** PLASTIC FACE SHIELD OR SPLASH-PROOF SAFETY GOGGLES SHOULD BE WORN WHEN HANDLING THIS MATERIAL.
- SKIN PROTECTION:** USE IMPERVIOUS SYNTHETIC RUBBER CLOTHING (BOOTS, GLOVES, APRONS, ETC.) OVER PARTS OF THE BODY SUBJECT TO EXPOSURE. LAUNDRY SOILED CLOTHES.
- RESPIRATORY PROTECTION:** RESPIRATORY PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE. IF VAPOR OR MIST IS GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, USE AN ORGANIC VAPOR RESPIRATOR WITH A DUST AND MIST FILTER. ALL RESPIRATORS MUST BE NIOSH CERTIFIED.
- VENTILATION:** GENERAL ROOM VENTILATION IS NORMALLY SUFFICIENT. IF VAPOR OR MIST IS GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, ADEQUATE VENTILATION IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE MUST BE PROVIDED TO MAINTAIN CONCENTRATIONS BELOW THE SPECIFIED EXPOSURE OR FLAMMABLE LIMITS.
- OTHER:** CONSUMPTION OF FOOD AND BEVERAGE SHOULD BE AVOIDED IN WORK AREAS WHERE HYDROCARBONS ARE PRESENT. ALWAYS WASH HANDS AND FACE WITH SOAP AND WATER BEFORE EATING, DRINKING, OR SMOKING.

## 6. FIRE PROTECTION INFORMATION

FLASH POINT: 36 INCHES

TEST METHOD: FLAME EXTENSION

AUTOIGNITION TEMPERATURE: NO DATA

TEST METHOD: NO DATA

FLAMMABLE LIMITS IN AIR % BY VOLUME

LOWER: NO DATA

UPPER: NO DATA

EXTINGUISHING  
MEDIA:

USE WATER SPRAY (FOG), DRY CHEMICAL, FOAM, OR CARBON DIOXIDE.

SPECIAL FIRE  
FIGHTING  
PROCEDURES:WATER MAY BE INEFFECTIVE BUT CAN BE USED TO COOL CONTAINERS EXPOSED TO  
HEAT OR FLAME.UNUSUAL FIRE  
AND EXPLOSIVE  
CONDITIONS:DENSE SMOKE MAY BE GENERATED WHILE BURNING. CARBON MONOXIDE, CARBON  
DIOXIDE, AND OTHER OXIDES MAY BE GENERATED AS PRODUCTS OF COMBUSTION.  
CAUTION!--CONTENTS ARE UNDER PRESSURE AND CAN EXPLODE WHEN EXPOSED TO HEAT  
OR FLAMES.

## 7. REACTIVITY DATA

STABILITY (THERMAL, LIGHT, ETC.): STABLE

CONDITIONS TO AVOID: NONE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NONE

INCOMPATIBILITY MATERIALS TO AVOID: MAY REACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

## 8. ENVIRONMENTAL PRECAUTIONS

STEPS TO BE  
TAKEN IF  
MATERIAL IS  
RELEASED OR  
SPILLED:CONSULT HEALTH EFFECT INFORMATION IN SECTION III, PERSONAL HEALTH  
PROTECTION INFORMATION IN SECTION V, FIRE PROTECTION INFORMATION IN  
SECTION VI, AND REACTIVITY DATA IN SECTION VII. NOTIFY APPROPRIATE  
AUTHORITIES OF SPILL. CONTAIN SPILL IMMEDIATELY. DO NOT ALLOW SPILL TO  
ENTER SEWERS OR WATERCOURSES. REMOVE ALL SOURCES OF IGNITION. PROVIDE  
ADEQUATE VENTILATION DURING CLEAN-UP. ABSORB WITH SOLVENT ABSORBENT  
MATERIAL. LARGE SPILLS MAY BE PICKED UP USING VACUUM PUMPS, SHOVELS,  
BUCKETS, OR OTHER MEANS AND PLACED IN DRUMS OR OTHER SUITABLE CONTAINERS.WASTE DISPOSAL  
METHOD:ALL DISPOSALS MUST COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS. THE  
MATERIAL, IF SPILLED OR DISCARDED, MAY BE A RCRA WASTE. THE MATERIAL, IF  
SPILLED OR DISCARDED, MAY BE A REGULATED WASTE. REFER TO STATE AND LOCAL  
REGULATIONS. CAUTION! IF REGULATED SOLVENTS ARE USED TO CLEAN UP SPILLED  
MATERIAL, THE RESULTING WASTE MIXTURE MAY BE REGULATED. DEPARTMENT OF  
TRANSPORTATION (DOT) REGULATIONS MAY APPLY FOR TRANSPORTING THIS MATERIAL  
WHEN SPILLED. WASTE MATERIAL MAY BE LANDFILLED OR INCINERATED AT AN  
APPROVED FACILITY.

## 9. MISCELLANEOUS

HANDLING AND  
STORAGE  
REQUIREMENTS:

THIS PRODUCT IS CLASSIFIED AS ORM-D (CONSUMER COMMODITY) UNDER DOT REGULATIONS. SEE 49 CFR 171 THROUGH 178 FOR SHIPPING REQUIREMENTS. ALL IGNITION SOURCES IN THE AREA SHOULD BE CONTROLLED. FIRE EXTINGUISHERS SHOULD BE KEPT READILY AVAILABLE. SEE NFPA 30 AND OSHA 1910.106--FLAMMABLE AND COMBUSTIBLE LIQUIDS. DO NOT STORE AT TEMPERATURES GREATER THAN 120 F. CONTENTS UNDER PRESSURE AND CAN EXPLODE WHEN EXPOSED TO HEAT OR OPEN FLAME. CAUTION!--DO NOT PUNCTURE OR INCINERATE. THIS PRODUCT IS A CONTROLLED SUBSTANCE UNDER THE CANADIAN WHMIS REGULATIONS. THIS PRODUCT IS CLASSIFIED AS CLASS B DIV 5, - FLAMMABLE AEROSOLS. CLASS D, DIV 2, SUB DIV B - TOXIC MATERIAL. UNDER CANADIAN TRANSPORTATION OF DANGEROUS GOODS REGULATIONS, THIS PRODUCT IS CLASSIFIED AS AEROSOLS, 2.1, UN1950.

ADDITIONAL  
INFORMATION:

THIS MIXTURE MAY BE FORMULATED IN PART WITH COMPONENTS PURCHASED FROM OTHER COMPANIES. IN MANY INSTANCES, ESPECIALLY WHEN PROPRIETARY OR TRADE SECRET MATERIALS ARE USED, PENNZOIL COMPANY MUST RELY UPON THE HAZARD EVALUATION OF SUCH COMPONENTS SUBMITTED TO PENNZOIL BY THAT PRODUCT'S MANUFACTURER OR IMPORTER.

=====

THIS PRODUCT CONTAINS THE FOLLOWING SARA TITLE III, SECTION 313  
CHEMICALS:

METHYL ETHYL KETONE	CAS#	78-93-3	7%
1,2,4-TRIMETHYLBENZENE	CAS#	95-63-6	14%

=====

ALL INGREDIENTS OF THIS PRODUCT ARE LISTED ON THE TOXIC SUBSTANCE CONTROL ACT (TSCA) INVENTORY.

\*\*\*THIS PRODUCT MAY CONTAIN THE FOLLOWING CHEMICAL(S) LISTED ON  
CALIFORNIA'S PROPOSITION 65 AS KNOWN TO THE STATE TO CAUSE CANCER:

BENZENE < 5 PPB \*\*\*

DOT (NON-BULK): CONSUMER COMMODITY, ORM-D

## 10. PHYSICAL PROPERTIES

BOILING POINT: < -29 C / -20 F (PROPELLANT)  
MELTING POINT: NOT APPLICABLE

PERCENT VOLATILE: < 75%  
VAPOR DENSITY  
(AIR=1): 3 - 5

APPEARANCE: CLEAR STRAW COLORED LIQUID

EVAPORATION RATE  
(EE=1): > 1

ODOR: SOLVENT

SPECIFIC GRAVITY: 0.84

VAPOR PRESSURE: 48 PSIG @ 20 C

MOLECULAR WEIGHT: VARIES

SOLUBILITY: SOLUBLE IN HYDROCARBONS. EMULSIFIES IN WATER.

DISCLAIMER OF WARRANTY:

THE INFORMATION CONTAINED HEREIN IS BASED UPON DATA AVAILABLE TO US, AND REFLECTS OUR BEST PROFESSIONAL JUDGEMENT. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY USE, OR ANY OTHER WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF SUCH DATA, THE RESULTS TO BE OBTAINED FROM THE USE THEREOF, OR THAT ANY SUCH USE DOES NOT INFRINGE ANY PATENT. SINCE THE INFORMATION CONTAINED HEREIN MAY BE APPLIED UNDER CONDITIONS OF USE BEYOND OUR CONTROL AND WITH WHICH WE MAY BE UNFAMILIAR, WE DO NOT ASSUME ANY RESPONSIBILITY FOR THE RESULTS OF SUCH APPLICATION. THIS INFORMATION IS FURNISHED UPON THE CONDITION THAT THE PERSON RECEIVING IT SHALL MAKE HIS OWN DETERMINATION OF THE SUITABILITY OF THE MATERIAL FOR HIS PARTICULAR PURPOSE.



## MATERIAL SAFETY DATA SHEET

PRODUCT  
FUEL INJECTOR CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

5/14/98

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS: 370

Formula: SEE SECTION 2

Part Number: 370

## Synonyms:

DESCRIPTION: A FUEL ADDITIVE PRODUCT CONTAINING KEROSENE

## Manufacturer

THE PENRAY COMPANIES, INC.  
440 DENNISTON COURT  
WHEELING, IL 60090

Phone: 847-459-5000  
Emergency: 1-800-752-7869 X7

## Supplier

"X" LABORATORIES, INC.  
440 DENNISTON COURT  
WHEELING, IL 60090

Phone: 847-459-5020  
Emergency: 1-800-752-7869 X7

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT NAMES	% OF PRODUCT			EXPOSURE LIMITS			
				OSHA TWA		ACGIH	
				PPM	MG/M3	PPM	MG/M3
KEROSENE CAS #: 8008206	BT	85	90	400	NG	NG	NG
ISOPROPANOL CAS #: 67630	BT	10	15	400	980	400	980

## SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Prolonged contact with skin may cause moderate irritation. Contact with eyes can cause severe irritation. Inhalation of vapors may cause respiratory irritation.

## POTENTIAL HEALTH EFFECTS

CARCINOGENICITY: Product not considered a carcinogen by OSHA, NTP, or IARC.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE: Pre-existing eye or skin conditions may be aggravated by overexposure to this product.

TARGET ORGANS: Liver, lungs, kidneys.

PRIMARY ENTRY ROUTES: Skin absorption and inhalation.



## MATERIAL SAFETY DATA SHEET

PRODUCT  
FUEL INJECTOR CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 2

### ACUTE HEALTH EFFECTS

EYE CONTACT: Will cause irritation upon contact.

SKIN CONTACT: Prolonged or repeated contact with skin can cause irritation.

INHALATION: Respiratory irritation and dizziness.

INGESTION: Over exposure to the ingredients in this product can cause liver abnormalities and kidney damage.

HMIS Ratings:	1 HEALTH	4 FLAMMABILITY	0 REACTIVITY
	0=Insignificant	1=Slight	2=Moderate
			3=High
			4=Severe

### SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes. Seek medical attention.

SKIN CONTACT: Wash area with soap and water. Seek medical attention if irritation persists.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. Seek medical attention.

INGESTION: DO NOT induce vomiting. Give CONSCIOUS victim large quantities of water and seek medical attention immediately. NEVER give water to unconscious victim or victim having trouble breathing.

### SECTION 5 - FIRE FIGHTING MEASURES

Closed Cup Flash Pt. .: < 70 F  
Open Cup Flash Point .: NG  
Fire Point . . . . .: NG  
Auto Ignition . . . . .: NG  
Lower Explosion Limit : NG  
Upper Explosion Limit : NG

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Vapors are heavier than air and can collect in low areas.

FIRE FIGHTING INSTRUCTIONS: Containers can build up pressure if exposed to fire. Containers should be cooled with water spray.



## MATERIAL SAFETY DATA SHEET

PRODUCT  
FUEL INJECTOR CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 3

FIRE FIGHTING EQUIPMENT: Self contained breathing apparatus with full face piece operated in pressure demand or positive pressure mode.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL/LEAK PROCEDURES: Notify safety personnel, evacuate all unnecessary personnel, and provide adequate ventilation. If feasible without risk, clean-up personnel should stop leak. All clean-up personnel should wear proper personal protective equipment.

SMALL SPILL: Clean with inert absorbant and place in recovery drums for disposal.

LARGE SPILL: Dike to prevent further migration of material. Do not release into waterways or sewers. Follow applicable OSHA regulation 20CFR1910.120

### SECTION 7 - HANDLING AND STORAGE

STORAGE REQUIREMENTS: Store in clean, dry locations away from excessive heat. Store in areas designated for the storage of combustible liquids according to NFPA 30 (Flammable and Combustible Liquids Code).

HANDLING PRECAUTIONS: Wash thoroughly after handling. Do not get into eyes, on skin, or on clothing.

### SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION EQUIPMENT

ENGINEERING CONTROLS: Eye wash station and safety shower.

VENTILATION: Strong general or local exhaust ventilation.

#### PERSONAL PROTECTIVE EQUIPMENT

EYE PROTECTION: Chemical splash goggles with indirect or no ventilation.

SKIN PROTECTION: Chemical resistant gloves such as Nitrile or Neopreme.

RESPIRATORY PROTECTION: Air purifying organic vapor respirator if if vapors are a nuisance or if concentrations are above PEL or TLV.

COMMENTS: Never eat, drink, or smoke in work areas.

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point .....	>	300 F		
Specific Gravity .....		0.81		
Vapor Pressure .....	BT	3.0	5.0	mmHg
Vapor Density .....		4.5		
Percent Volatiles .....		100%		



## MATERIAL SAFETY DATA SHEET

PRODUCT  
FUEL INJECTOR CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 4

pH .....: NG

NONE

Molecular Weight .....: NG

Solubility in Water ...: NOT SOLUBLE

Odor/Appearance/Other Characteristics:

AMBER LIQUID, PETROLEUM DISTILLATE ODOR

SECTION 10 - STABILITY AND REACTIVITY INFORMATION

STABILITY: Material is stable.

POLYMERIZATION: Hazardous polymerization cannot occur.

CHEMICAL INCOMPATIBILITIES: Strong Oxidizing agents.

CONDITIONS TO AVOID: Excessive heat, open flame.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon Dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

---CHEMICAL NAME---

Kerosene

---LD50---

28 ml/kg (oral/rabbit)

SECTION 12 - ECOLOGICAL INFORMATION

No data.

SECTION 13 - DISPOSAL CONSIDERATIONS

As a waste, this product =DOES MEET= the criteria of a hazardous waste as defined by RCRA (40CFR361). As a waste, this product can be fuel blended at a fuel blending facility.

Dispose of in accordance with all applicable state, federal and local regulations.

SECTION 14 - TRANSPORTATION INFORMATION

Shipping Regulations

UN/NA Number: NG

DOT Hazard Class: NONE

Shipping Label: NONE

Shipping Name: :

DOMESTIC: Consumer Commodity ORM-D.



## MATERIAL SAFETY DATA SHEET

PRODUCT  
FUEL INJECTOR CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 5

EXPORT: Petroleum Distillates, n.o.s., (Kerosene), Class 3.2, UN  
1268, II, Page 3375, FP 21 C, limited quantity

### SECTION 15 - REGULATORY INFORMATION

#### U.S. FEDERAL REGULATIONS

OSHA: Considered hazardous as defined by 29CFR1910.1200

EPA SARA Title III

Section 311-312 (40CFR370): If stored in excess of the  
threshold quantities, this product should be reported as a(n)

- Immediate (acute) health hazard
- Delayed (chronic) health hazard
- Fire Hazard

Section 313 (40CFR372): This product does not contain  
ingredients which are subject to the reporting requirements  
of SARA 313.

#### STATE REGULATIONS

California Proposition 65: This product does not contain ingredients  
which are listed on current Proposition 65 list.

### SECTION 16 - OTHER INFORMATION

Preparer's Name & Title:

Paul A. Zoubek, ENVIRONMENTAL HEALTH & SAFETY MANAGER

Preparation Date: 4/15/97

MSDS NUMBER: 370

REVISION: 7

NOTES: NG = "Not Given"

BT = "Between"

< = "Less Than"

> = "Greater Than"

USER'S RESPONSIBILITY: This MSDS provides environmental, health, and safety  
information. This product is to be used in applications consistent  
with our product literature and container label. Individuals  
handling this product should be informed of the recommended safety  
precautions and have access to this MSDS. Please contact your local  
sales representative or our Environmental Health and Safety  
Department for further information.

END OF MSDS



# MATERIAL SAFETY DATA SHEET

PRODUCT  
NON-CHLORINATED BRAKE CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

3/21/97

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS: 830

Formula: SEE SECTION 2

Part Number: 830

Synonyms:

DESCRIPTION: AEROSOL BRAKE CLEANER CONTAINING ORGANIC SOLVENTS

Manufacturer

THE PENRAY COMPANIES, INC.  
440 DENNISTON COURT  
WHEELING, IL 60090

Phone: 847-459-5000  
Emergency: 1-800-752-7869 X7

Supplier

"X" LABORATORIES, INC.  
440 DENNISTON COURT  
WHEELING, IL 60090

Phone: 847-459-5020  
Emergency: 1-800-752-7869 X7

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT NAMES	% OF PRODUCT			EXPOSURE LIMITS			
				OSHA TWA		ACGIH	
				PPM	MG/M3	PPM	MG/M3
CARBON DIOXIDE CAS #: 124389	BT	1	5	5000	9000	5000	9000
XYLENE CAS #: 1330207	BT	20	25	100	434	100	434
n-HEPTANE CAS #: 142825	BT	50	55	400	1600	400	1640
ACETONE CAS #: 67641	BT	15	20	750	1800	750	1780

## SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful if inhaled, swallowed, or absorbed through skin.



# MATERIAL SAFETY DATA SHEET

PRODUCT  
NON-CHLORINATED BRAKE CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 2

## POTENTIAL HEALTH EFFECTS

CARCINOGENICITY: Product not considered a carcinogen by OSHA, NTP, or IARC.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE: Pre-existing eye or skin conditions may be aggravated by overexposure to this product.

TARGET ORGANS: Central nervous system, liver, lungs, kidneys

PRIMARY ENTRY ROUTES: Skin absorption and inhalation

## ACUTE HEALTH EFFECTS

EYE CONTACT: Will cause irritation upon contact.

SKIN CONTACT: Prolonged or repeated contact with skin can cause irritation.

INHALATION: Respiratory irritation, dizziness, changes in heart rate

INGESTION: Gastrointestinal irritation, nausea, vomiting, and diarrhea

CHRONIC HEALTH EFFECTS: Overexposure to the ingredients in this product may cause liver abnormalities and kidney damage.

HMIS Ratings: 2 HEALTH 4 FLAMMABILITY 0 REACTIVITY  
0=Insignificant 1=Slight 2=Moderate 3=High 4=Severe

## SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes. Seek medical attention.

SKIN CONTACT: Wash area with soap and water. Seek medical attention if irritation persists.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. Seek medical attention.

INGESTION: DO NOT induce vomiting. Give CONSCIOUS victim glass of water and seek medical attention. NEVER give water to unconscious victim.

## SECTION 5 - FIRE FIGHTING MEASURES

Closed Cup Flash Pt. .: NG  
Open Cup Flash Point .: NG  
Fire Point . . . . .: NG  
Auto Ignition . . . . .: NG  
Lower Explosion Limit : NG  
Upper Explosion Limit : NG

0 F



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PRODUCT  
NON-CHLORINATED BRAKE CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 3

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Vapors are heavier than air and can collect in low areas.

FIRE FIGHTING INSTRUCTIONS: Containers can build up pressure if exposed to fire. Containers should be cooled with water spray.

FIRE FIGHTING EQUIPMENT: Self contained breathing apparatus with full face piece operated in pressure demand or positive pressure mode.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL/LEAK PROCEDURES: Notify safety personnel, evacuate all unnecessary personnel, and provide adequate ventilation. If feasible without risk, clean-up personnel should stop leak. All clean-up personnel should wear proper personal protective equipment.

SMALL SPILL: Clean with inert absorbant and place in recovery drums for disposal.

LARGE SPILL: Dike to prevent further migration of material. Do not release into waterways or sewers. Follow applicable OSHA regulation 20CFR1910.120

NOTE: Product in aerosol container. Spill hazard unlikely.

### SECTION 7 - HANDLING AND STORAGE

STORAGE REQUIREMENTS: Store in clean, dry locations away from excessive heat. Store in areas designated for the storage of (Level II) aerosols according to NFPA 30B (Manufacture and Storage of Aerosol Products).

HANDLING PRECAUTIONS: Wash thoroughly after handling. Do not get into eyes, on skin, or on clothing. Do not smoke while using this product. Do not use near excessive heat, sparks, or open flame.

### SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION EQUIPMENT

ENGINEERING CONTROLS: Eye wash station and safety shower.

VENTILATION: Strong general or local exhaust ventilation.



# MATERIAL SAFETY DATA SHEET

PRODUCT  
NON-CHLORINATED BRAKE CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 4

## PERSONAL PROTECTIVE EQUIPMENT

EYE PROTECTION: Chemical splash goggles with indirect or no ventilation.

SKIN PROTECTION: Chemical resistant glove such as nitrile or neoprene.

RESPIRATORY PROTECTION: Wear organic vapor air purifying respirator when working with this product.

COMMENTS: Never eat, drink, or smoke in work areas.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point .....: BT 133 F 200 F  
Specific Gravity .....: BT 0.696 0.870  
Vapor Pressure .....: > 40 mmHg  
Vapor Density .....: > 1  
Percent Volatiles .....: 100%  
Evaporation Rate .....: > 1  
pH .....: NG  
Molecular Weight .....: NG  
Solubility in Water ...: NOT SOLUBLE IN WATER  
Odor/Appearance/Other Characteristics:  
COLORLESS LIQUID, PETROLEUM DISTILLATE ODOR

## SECTION 10 - STABILITY AND REACTIVITY INFORMATION

STABILITY: Material is stable.

POLYMERIZATION: Hazardous polymerization cannot occur.

CHEMICAL INCOMPATIBILITIES: Strong oxidizing agents.

CONDITIONS TO AVOID: Excessive heat, open flame.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon Dioxide, various hydrocarbons.

## SECTION 11 - TOXICOLOGICAL INFORMATION

-----CHEMICAL NAME-----	---LD50---
n-Heptane	no data
Carbon Dioxide	no data
Acetone	10.7 ml/kg (oral)
Xylene	7.53 g.kg (oral)

## SECTION 12 - ECOLOGICAL INFORMATION



# MATERIAL SAFETY DATA SHEET

PRODUCT  
NON-CHLORINATED BRAKE CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 5

No data.

## SECTION 13 - DISPOSAL CONSIDERATIONS

As a waste, this product =DOES MEET= the criteria of a hazardous waste as defined by RCRA (40CFR361). As a waste, this product can be fuel blended at a fuel blending facility.

EPA Waste Code: D001

Dispose of in accordance with all applicable state, federal and local regulations.

## SECTION 14 - TRANSPORTATION INFORMATION

### Shipping Regulations

UN/NA Number: UN1950  
DOT Hazard Class: ORM-D  
Shipping Label: NONE  
Shipping Name: :

DOMESTIC: Consumer Commodity ORM-D.

EXPORT: Aerosol Dispensers, UN 1950, IMCO 9.0, Page 9022

## SECTION 15 - REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS

OSHA: Considered hazardous as defined by 29CFR1910.1200

EPA SARA Title III

Section 311-312 (40CFR370): If stored in excess of the threshold quantities, this product should be reported as a(n)

- Immediate (acute) health hazard
- Delayed (chronic) health hazard
- Sudden Release hazard
- Fire Hazard

Section 313 (40CFR372): This product contains the following ingredients which are subject to the reporting requirements of SARA 313.

- Xylene
- Acetone

### STATE REGULATIONS

California Proposition 65: This product does not contain ingredients which are subject to the reporting requirements of Proposition 65.

## SECTION 16 - OTHER INFORMATION

Preparer's Name & Title:

Paul A. Zoubek, Environmental Health & Safety Manager

Preparation Date: 12/01/95



## MATERIAL SAFETY DATA SHEET

PRODUCT  
NON-CHLORINATED BRAKE CLEANER

"X" LABORATORIES, INC. 440 DENNISTON COURT WHEELING, IL 60090 847-459-5020

Page 6

REVISION: 3

NOTES: NG = "Not Given"

BT = "Between"

< = "Less Than"

> = "Greater Than:"

USER'S RESPONSIBILITY: This MSDS provides environmental, health, and safety information. This product is to be used in applications consistent with our product literature and container label. Individuals handling this product should be informed of the recommended safety precautions and have access to this MSDS. Please contact your local sales representative or our Environmental Health and Safety Department for further information.

END OF MSDS

# MATERIAL SAFETY DATA SHEET

## Radiator Specialty Company

1400 W. INDEPENDENCE BLVD. - CHARLOTTE, N.C. 28208 • 704-377-8555

### MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

### U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration.  
(Non-Mandatory Form) Form Approved OMB No. 1218-0072

### SECTION I GENERAL INFORMATION

PRODUCT NAME CONCENTRATED 10 MINUTE FLUSH  
PARTS NUMBER C14-12

NOTE: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

### SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT	WT. %	C.A.S. NO.	TLV (ACGIH <del>X</del> OSHA <del>---</del> )
2-Butoxy-1-Ethanol*	3-4	111-76-2	25 ppm
Ethylene Diamine Tetraacetic Acid, Sodium Salt	4-5	64-02-8	NDA

Comments: \* THIS CHEMICAL IS SUBJECT TO REPORTING REQUIREMENTS OF SECTION 313 SARA TITLE III

Components not identified are non-hazardous according to 29 CFR 1910.1200

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Specific Gravity (H <sub>2</sub> O = 1) <u>1.00</u>	pH <u>7.0</u>
Solubility in Water <u>Soluble</u>	Solubility in Solvent <u>N/A</u>
Flash Point (Method) - F° <u>None</u>	% Volatiles By Wt. <u>Greater than 90%</u>
Melting Point - F° <u>N/A</u>	Boiling Point - F° <u>Approx. 212 F°</u>
Vapor Pressure (mmHg) <u>N/A</u>	Vapor Density (Air = 1) <u>N/A</u>
Evaporation Rate (Butyl Acetate = 1) <u>N/A</u>	
Appearance and Odor <u>Off white liquid with characteristic odor.</u>	

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Non-flammable  
Water Fog --- Foam --- CO<sub>2</sub> --- Dry Chemical ---

SPECIAL FIRE FIGHTING PROCEDURES. Wear self-contained, positive pressure breathing apparatus and protective clothes.

UNUSUAL FIRE AND EXPLOSION HAZARDS None known

**SECTION V REACTIVITY DATA**Stable X Unstable \_\_\_\_\_ Corrosive NO Hazardous Polymerization? Yes \_\_\_\_\_ No X

Incompatibilities Avoid oxidizing agents, and strong acids.

Hazardous Decomposition or Byproducts At boiling: small amounts of nitrogen oxides and carbon dioxide.

**SECTION VI HEALTH HAZARD INFORMATION****Recommended TLV of Product** 25 ppm**EYE CONTACT** May cause eye burns resulting in permanent damage.**SKIN CONTACT** May cause skin burns with overexposure. Irritating with skin absorption.**INHALATION** Irritating to mucous membranes**INGESTION** HARMFUL OR FATAL IF SWALLOWED. Irritating to throat and**OTHER**

stomach. Over exposure can lead to kidney and liver damages.

**SECTION VII EMERGENCY AND FIRST AID PROCEDURES****EYE CONTACT** Flush with water for 15 minutes thoroughly. Consult physician immediately.**SKIN CONTACT** Wash with soap and water thoroughly. Remove contaminated clothing and wash before re-use. If skin burn is observed, consult physician.**INHALATION** Move to fresh air with proper ventilation.**INGESTION** Give two glasses of water. INDUCE VOMITING! Consult a physician immediately and get medical attention.**SECTION VIII SPECIAL PROTECTION INFORMATION**

CONSUMER	BULK HANDLING (Prolonged Exposure)
<b>RESPIRATORY PROTECTION</b> N/A	If TLV is exceeded, wear NIOSH approved respirator.
<b>VENTILATION</b> Use with adequate ventilation	General
<b>EYE PROTECTION</b> N/A	Goggles and full face shield
<b>PROTECTIVE CLOTHING</b> N/A	Rubber gloves and apron

**SECTION IX PRECAUTIONS FOR SAFE HANDLING AND USE****SPILL OR LEAK PROCEDURE** Observing health hazards described above, ventilate area, confine liquid, flush with water and transfer to waste drum.**WASTE DISPOSAL METHOD** Dispose of in accordance with all applicable government laws and regulations.**STORAGE AND HANDLING PRECAUTIONS** Store away from oxidizing agents and strong acids.**OTHER PRECAUTIONS** KEEP AWAY FROM CHILDREN AND ANIMALS. WEARING CONTACT LENSES IS INADVISABLE!Supersedes APRIL 1992OSHA Revised AUG. 1996Title K. PHILLIPS-CHEMIST

HAZARD INFORMATION LABEL DATA	
HAZARD CODE	FLAMMABILITY
4=Extreme 3=High 2=Moderate 1=Slight 0=Negligible	
REACTIVITY	

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for your information, investigation, and verification.

# MATERIAL SAFETY DATA SHEET

## Radiator Specialty Company

1400 W. INDEPENDENCE BLVD. • CHARLOTTE, N.C. 28208 • 704-377-8555

### MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

### U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration.  
(Non-Mandatory Form) Form Approved OMB No. 1218-0072

### SECTION I GENERAL INFORMATION

PRODUCT NAME MOTOR FLUSH  
PARTS NUMBER MF-2

NOTE: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

### SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT	WT. %	C.A.S. NO.	TLV (ACGIH <input checked="" type="checkbox"/> OSHA <input type="checkbox"/> )
Aliphatic Petroleum Distillate	80	8008-20-6	100 ppm (Air)
Naphthenic Petroleum Oil Mixture	15	64742-53-6/64742-52-5	5 mg/m <sup>3</sup> (Mist)
Diethylene Glycol			
Butyl Ether	4-5	112-34-5	NDA
Comments:			

Components not identified are non-hazardous according to 29 CFR 1910.1200

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Specific Gravity (H<sub>2</sub>O = 1) 0.86-0.89 pH 6-7  
 Solubility in Water Insoluble Solubility in Solvent Petroleum  
 Flash Point (Method) - F° 130°F (TCC) % Volatiles By Wt. Greater than 90%  
 Melting Point - F° N/A Boiling Point - F° Approx. 175°  
 Vapor Pressure (mmHg) N/A Vapor Density (Air = 1) N/A  
 Evaporation Rate (Butyl Acetate = 1) N/A  
 Appearance and Odor Amber liquid with characteristic odor

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Caution: COMBUSTIBLE!  
 Water Fog        Foam X CO<sub>2</sub> X Dry Chemical X

SPECIAL FIRE FIGHTING PROCEDURES. Wear self-contained, positive pressure breathing apparatus and protective clothes.

UNUSUAL FIRE AND EXPLOSION HAZARDS

None known

**SECTION V REACTIVITY DATA**Stable X Unstable \_\_\_\_\_ Corrosive NO Hazardous Polymerization? Yes \_\_\_\_\_ No X

Incompatibilities Avoid open flame or sparks, oxidizing agents and acids.

Hazardous Decomposition or Byproducts Fire: normal products of combustion, carbon dioxide, carbon monoxide, smoke, sulfur oxides, nitrogen oxides, hydrogen chloride.

**SECTION VI HEALTH HAZARD INFORMATION**

Recommended TLV of Product 100 ppm (Air) Aliphatic Petroleum Distillate

EYE CONTACT Irritant. May cause eye burns SKIN CONTACT Irritant. Defatting or dermatitis with prolonged exposure.

INHALATION May cause headache, dizziness, and narcosis effects. INGESTION HARMFUL OR FATAL IF SWALLOWED!

OTHER N/A

**SECTION VII EMERGENCY AND FIRST AID PROCEDURES**

EYE CONTACT Flush with water thoroughly for at least 15 minutes, while lifting eyelids. Consult a physician.

SKIN CONTACT Wash with soap and water thoroughly. Remove contaminated clothing and launder before re-use.

INHALATION Remove to fresh air. If adverse effects persist, apply artificial respiration. Consult a physician.

INGESTION DO NOT INDUCE VOMITING! If adverse effects persist, consult a physician immediately. DO NOT ADMINISTER EPINEPHRINE OR ADRENALIN!!

**SECTION VIII SPECIAL PROTECTION INFORMATION**

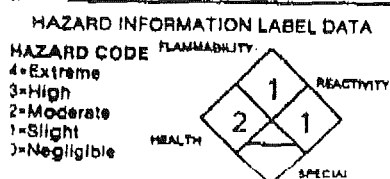
CONSUMER	BULK HANDLING (Prolonged Exposure)
RESPIRATORY PROTECTION N/A	If TLV is exceeded, wear NIOSH approved respirator.
VENTILATION Use with adequate ventilation	General
EYE PROTECTION N/A	Goggles
PROTECTIVE CLOTHING N/A	Solvent resistant gloves and apron.

**SECTION IX PRECAUTIONS FOR SAFE HANDLING AND USE**

SPILL OR LEAK PROCEDURE Observing health hazards described above, ventilate area, remove ignition sources. Confine spill, wipe up with rags and transfer to waste drum.

WASTE DISPOSAL METHOD Dispose of in accordance with all applicable government laws and regulations.

STORAGE AND HANDLING PRECAUTIONS Store away from ignition sources and oxidizing agents.

OTHER PRECAUTIONS KEEP AWAY FROM CHILDREN AND ANIMALS!  
WEARING CONTACT LENSES IS INADVISABLE!Supersedes NOV. 94OSHA Revised AUG. 96Title K. PHILLIPS-CHEMIST

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim any liability for any errors or omissions.

704-821-6985 RSC LAB

# MATERIAL SAFETY DATA SHEET

## Radiator Specialty Company

1900 WILKINSON BLVD. CHARLOTTE, NC 28208 (704) 377-6555

### MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

### US DEPARTMENT OF LABOR

Occupational Safety and Health Administration.  
(Non-Mandatory Form) Form Approved OMB No. 1218-0072

### SECTION I GENERAL INFORMATION

PRODUCT NAME MOTOR FLUSH  
PART NUMBER MF-3, -15

NOTE: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

### SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT	WT%	C.A.S. NO.	TLV (ACGIH-X-OSHA-)
Aliphatic Petroleum Distillate	90-91	68476-34-6	100 ppm(air)
Naphthenic Petroleum Oil Mixture	9-10	64742-53-6/647-52-5	5mg/m <sup>3</sup> (mist)
Sodium Petroleum-Sulfonate	0-1	68608-26-4	5 mg/m <sup>3</sup> (mist)
Comments:			

Components not Identified are non-hazardous according to 29 CFR 1910.1200

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Specific Gravity (H <sub>2</sub> O=1)	0.86-0.89	pH	N/A
Solubility in Water	Insoluble	Solubility in Solvent	Petroleum.
Flash Point (Method) - F°	160°F (TCC)	% Volatiles By Wt.	Greater than 90%
Melting Point - F°	N/A	Boiling Point - F°	Approx. 175°
Vapor Pressure (mmHg)	N/A	Vapor Density (Air=1)	N/A
Evaporation Rate (Butyl Acetate=1)	N/A		
Appearance and Odor	Lt. Amber liquid with characteristic odor.		

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Caution: COMBUSTIBLE!			
Water Fog	Foam X	CO <sub>2</sub> X	Dry Chemical X
SPECIAL FIRE FIGHTING PROCEDURES. Wear self-contained, positive pressure breathing apparatus and protective clothes.			
UNUSUAL FIRE AND EXPLOSION HAZARDS		None known	

## SECTION V REACTIVITY DATA

Stable	X	Unstable	Corrosive	NO	Hazardous Polymerization?	Yes	No	X
Compatibilities	Avoid open flame or sparks, oxidizing agents and acids.							
Hazardous Decomposition or Byproducts	Fire: normal products of combustion, carbon dioxide, carbon monoxide, smoke, sulfur oxides, nitrogen oxides.							

## SECTION VI HEALTH HAZARD INFORMATION

Recommended TLV of Product	100 ppm (Air) Aliphatic Petroleum Distillate
EYE CONTACT	SKIN CONTACT
Irritant. May cause eye burns.	Irritant. Defatting or dermatitis with prolonged exposure.
INHALATION	INGESTION
May cause headache, dizziness, and narcosis effects.	HARMFUL OR FATAL IF SWALLOWED!
OTHER	N/A

## SECTION VII EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT	Flush with water thoroughly for at least 15 minutes, while lifting eyelids. Consult a physician.
SKIN CONTACT	Wash with soap and water thoroughly. Remove contaminated clothing and launder before re use.
INHALATION	Remove to fresh air. If adverse effects persist, apply artificial respiration. Consult a physician.
INGESTION	DO NOT INDUCE VOMITING! If adverse effects persist, consult a physician immediately. DO NOT ADMINISTER EPINEPHRINE OR ADRENALINE!!

## SECTION VIII SPECIAL PROTECTION INFORMATION

	CONSUMER	BULK HANDLING (Prolonged Exposure)
RESPIRATORY PROTECTION	N/A	If TLV is exceeded, wear NIOSH approved respirator.
VENTILATION	Use with adequate ventilation.	General
EYE PROTECTION	N/A	Goggles
PROTECTIVE CLOTHING	N/A	Solvent resistant gloves and apron.

## SECTION IX PRECAUTIONS FOR SAFE HANDLING AND USE

SPILL OR LEAK PROCEDURE	Observing health hazards described above, ventilate area, remove ignition sources, confine spill, wipe up with rags and transfer to waste drum.
WASTE DISPOSAL METHOD	Dispose of in accordance with all applicable government laws and regulations.
STORAGE AND HANDLING PRECAUTIONS	Store away from ignition sources and oxidizing agents.
OTHER PRECAUTIONS	KEEP AWAY FROM CHILDREN AND ANIMALS! WEARING CONTACT LENSES IS INADVISABLE!

## HAZARD INFORMATION LABEL DATA

HAZARD CODE	FLAMMABILITY	HEALTH	REACTIVITY	SPECIAL
4- Extreme	2	1	1	
3- High				
2- Moderate				
1- Slight				
0- Negligible				

Supersedes AUG 1988

OSHA Revised JULY 1987

Title R. GEER -CHEMIST

While Radstar Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification.

## \*\*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*\*

Name of Product **Sta-Kleen Washer Solvent**

Version Date.....October 24, 1996

Print Date.....

**SECTION 1 PRODUCT IDENTIFICATION**

COMPANY NAME WHO SENT MSDS..... CUL- MAC INDUSTRIES, INC.

ADDRESS: ..... 3720 South Venoy  
Wayne, Michigan, 48184

COMPANY PHONE NUMBER..... (313) 728-9700

EMERGENCY PHONE NUMBER..... (800) 535-5053

MSDS VERSION NUMBER..... 0001

TRADE NAME..... Sta-Kleen

CAS NUMBER..... Mixture

SYNONYMS..... None

CHEMICAL FAMILY..... Alcohol

PRODUCT CODE..... 2080

DISTRIBUTED BY.....

**SECTION 2 HAZARDOUS COMPONENTS**

MATERIAL	%	CAS #	OSHA	ACGIH	OTHER
Methyl alcohol	20	67-56-1	200ppm	200ppm	

**SECTION 3 PHYSICAL PROPERTIES**

BOILING POINT..... N/E  
FREEZING POINT..... 5 F  
VAPOR PRESSURE..... 97 mm for Methanol  
VAPOR DENSITY (AIR=1)..... 1.11 for Methanol  
SOLUBILITY IN WATER..... Complete  
PH..... neutral  
SPECIFIC GRAVITY..... 0.96  
PERCENT VOLATILE..... 99.9  
PERCENT NON-VOLATILE..... 0.1  
APPEARANCE AND ODOR..... Blue/mild alcoholic  
MATERIAL STATE..... Liquid  
EVAPORATION RATE..... N/E

Continued from page 1

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**SECTION 4****FIRE AND EXPLOSION DATA**

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FLASH POINT.....54 F  
FLAMMABLE LIMITS- LEL UEL..... 6.0-36.0 (for Methanol)  
EXTINGUISHING MEDIA..... Alcohol foam, dry chemical, CO<sub>2</sub>  
SPECIAL PROCEDURES..... Keep liquid and vapor away from heat, sparks,  
open flame and other ignition sources. Use  
water spray to cool exposed containers.  
UNUSUAL HAZARDS..... Vapor is heavier than air and may settle in low  
places or travel outward to a source of ignition  
and flashback. Flame is invisible in daylight.

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**SECTION 5****REACTIVITY DATA**

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STABILITY.....Stable  
HAZARDOUS POLYMERIZATION.....Will not occur  
CONDITIONS TO AVOID.....Keep away from heat, sparks, open flame  
INCOMPATIBILITY.....Strong oxidizers, strong bases and acids.  
HAZARDOUS DECOMPOSITION  
PRODUCTS..... Oxides of carbon, fumes and smoke.

---

**SECTION 6****HEALTH HAZARD DATA**

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THRESHOLD LIMIT VALUE..... 200 ppm for Methanol  
ROUTES OF ENTRY..... Skin, eyes, Gastrointestinal and Respiratory  
Tracts.  
EFFECTS OF OVEREXPOSURE..... Eyes: Causes Irritation; Skin: May cause  
irritation. May be harmful if absorbed through  
skin. Ingestion: May be harmful if swallowed.  
If taken internally, burns or irritation to  
mucous membranes, esophagus or GI tract  
can result. Ingestion may cause blindness.  
Inhalation: If TLV is exceeded, may cause  
irritation of nose, throat, and lungs.  
Overexposure may cause central nervous  
system depression manifested by headache,  
dizziness, nausea, vomiting, unconsciousness,  
and death in extremal cases.  
TARGET ORGAN EFFECTS..... Eyes, may cause irritation and/or blindness.  
Lungs, liver, kidney, CNS.  
CARCINOGENICITY..... Not listed as a carcinogen by OSHA or IARC.

Continued from page 2

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**SECTION 7**

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**EMERGENCY & FIRST AID**

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SKIN.....Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

EYES.....Immediately flush with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation. Contact physician immediately.

INHALATION.....Remove to fresh air and contact physician if necessary.

INGESTION.....Dilute by drinking large quantities of water. Immediately contact a physician or poison control center, or hospital emergency room.

ADDITIONAL MEASURES.....None

---

**SECTION 8**

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**PERSONAL PROTECTION**

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RESPIRATORY PROTECTION.....If TLV is exceeded use NIOSH/MSHA approved respirator.

PROTECTIVE GLOVES.....Use impervious gloves to prevent skin contact.

EYE PROTECTION.....Use goggles if contact is likely.

VENTILATION.....Local exhaust.

ADDITIONAL PROTEC. MEASURES.....Avoid contact with eyes, skin, or clothing. Avoid prolonged or repeated breathing of vapor. Handle in accordance with good industrial hygiene and safety practices.

---

**SECTION 9**

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**SPILL & DISPOSAL INFORMATION**

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SPILL OR LEAK PROCEDURES.....Eliminate all ignition sources. Ventilate the area. Enclose with diking material and place in suitable container for reuse or disposal or soak up with absorbent material and remove to a chemical disposal area. Keep out of sewers.

WASTE DISPOSAL.....According to local, state, and federal laws.

NEUTRALIZING CHEMICALS/MEDIA...None

RCRA HAZARDOUS WASTE NUMBER...None.

VOLATILE ORGANIC COMPOUND.....20%

Continued from page 3

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**SECTION 10**

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**OTHER REGULATORY INFORMATION**

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**SARA HAZARD CLASS.....****ACUTE HEALTH..... Yes****CHRONIC HEALTH..... Yes****FIRE HAZARD..... Yes****REACTIVE HAZARD..... No****PRESSURE RELEASE..... Yes****SECTION 313 TOXIC CHEMICALS..... Methanol,****DOT REGULATED..... Yes, in containers over 1L. In containers under 1L, may be released as a consumer commodity****SHIPPING NAME..... Methanol, 3, PG II****UN/NA NUMBER..... UN1230****DOT HAZARD CLASS..... 3, Flammable liquid****DOT HAZARD LABELS..... Primary: Flammable liquid  
Subsidiary: Poison****N.J. RIGHT TO KNOW.....**

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**SECTION 11**

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**LABEL INFORMATION**

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**LABEL HAZARDS..... Danger! Flammable, Harmful if swallowed.****SIGNAL WORDS.....****LABEL PRECAUTIONS..... Contains Methanol. Keep away from heat, sparks, open flame. May cause blindness if ingested. If swallowed induce vomiting. Give two teaspoons of baking soda. Call a physician immediately. Keep away from children.**

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**SECTION 12**

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**TSCA CERTIFICATION**

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We certify that all components of this product are registered under the regulations of the Toxic Substances Control Act (TSCA).

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**SECTION 13**

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**DISCLAIMER**

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The information herein has been compiled from sources believed to be accurate, reliable, and up to date to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make any warranties, nor assume any liability from its use or misuse.