

# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION	
<b>NFPA Rating:</b> Health-2; Flammability-3; Reactivity-0; Special-0 <b>Manufactured For:</b> Hillyard Industries, Inc. <b>Address:</b> 302 N. 4 <sup>th</sup> Street <b>Address:</b> St. Joseph, MO 64501	<b>HMIS Rating:</b> Health-2; Flammability-3; Reactivity-0; Personal Protection-B <b>DOT Hazard Classification:</b> ORM-D <b>Identity</b> (trade name as used on label): <b>I-Force Vandal Mark Remover</b> <b>(# HIL0110154)</b>
<b>Phone:</b> (816)-233-1321 ext. 8285 or <a href="http://www.hillyard.com">http://www.hillyard.com</a> <b>EMERGENCY RESPONSE NUMBER:</b> Chemtrec 1-800-424-9300 <b>NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA</b>	<b>MSDS Number:</b> A00178 <b>Revision:</b> 12 <b>Date Prepared:</b> 05/08/03 <b>Prepared By:</b> DL/IB <b>Information Calls:</b> (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION					
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
TOLUENE	108-88-3	Yes	200	100	d
ACETONE	67-64-1	No	1000	750	d
2-BUTOXYETHANOL	111-76-2	Yes	25 skin	25 skin	d
ISOBUTANE/PROPANE BLEND	75-28-5/74-98-6	No	800/1000	800/1000	d
METHYL ETHYL KETONE	78-93-3	Yes	200	200	d
<b>WARNING:</b> This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.					

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS	
<b>Boiling Point:</b> N/A	<b>Specific Gravity (H<sub>2</sub>O=1):</b> Concentrate Only = .84
<b>Vapor Pressure:</b> PSIG @ 70°F (Aerosols): Max.60	<b>Vapor Pressure (Non-Aerosols)(mm Hg and Temperature):</b> N/A
<b>Vapor Density (Air = 1):</b> N/E	<b>Evaporation Rate ( = 1):</b> N/E
<b>Solubility in Water:</b> Partial	<b>Water Reactive:</b> No
<b>Appearance and Odor:</b> Clear liquid, aromatic solvent odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA		
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) <b>EXTREMELY FLAMMABLE</b>	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E      % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

SECTION 4 - REACTIVITY HAZARD DATA	
<b>STABILITY</b> [ X ] STABLE [ ] UNSTABLE	<b>HAZARDOUS POLYMERIZATION</b> [ ] WILL [ X ] WILL NOT OCCUR
<b>Incompatibility</b> (Mat. to avoid): Acids and strong oxidizers.	<b>Conditions to Avoid:</b> Open flame, welding arcs, heat, sparks.
<b>Hazardous Decomposition Products:</b> CO, CO <sub>2</sub> .	

SECTION 5 - HEALTH HAZARD DATA	
<b>PRIMARY ROUTES OF ENTRY:</b> [ X ] INHALATION [ ] INGESTION [ X ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS	
<b>ACUTE EFFECTS:</b>	
<b>Inhalation:</b> Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.	
<b>Eye Contact:</b> Irritation	<b>Skin Contact:</b> Irritation
<b>Ingestion:</b> Possible chemical pneumonitis if aspirated into lungs. Nausea.	
<b>CHRONIC EFFECTS:</b> (Effects due to excessive exposure to the raw materials of this mixture) May cause cardiac abnormality, liver abnormalities, kidney and/or lung damage. Lab animals have experienced anemia, liver, kidney, lung, blood damage to 2 butoxyethanol.	
<b>Medical Conditions Generally Aggravated by Exposure:</b> May aggravate existing eye, skin, or upper respiratory conditions.	

EMERGENCY FIRST AID PROCEDURES	
<b>Eye Contact:</b> Flush with water for 15 minutes. If irritated, seek medical attention.	
<b>Skin Contact:</b> Wash with soap and water. If irritated, seek medical attention.	
<b>Inhalation:</b> Remove to fresh air. Resuscitate if necessary. Get medical attention.	
<b>Ingestion:</b> DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.	

SECTION 6 - CONTROL AND PROTECTIVE MEASURES	
<b>Respiratory Protection (specify type):</b> If vapor concentration exceeds TLV, use respirator approved by NIOSH.	
<b>Protective Gloves:</b> Rubber gloves.	<b>Eye Protection:</b> Safety glasses recommended.
<b>Ventilation Requirements:</b> Adequate ventilation to keep vapor concentration below TLV.	
<b>Other Protective Clothing &amp; Equipment:</b> None	
<b>Hygienic Work Practices:</b> Wash with soap and water before handling food. Remove contaminated clothing.	

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE	
<b>Steps To Be Taken if Material Is Spilled Or Released:</b> Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. Prevent from entering drains.	



# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

## IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-2; Reactivity-0; Special-0		HMIS Rating: Health-2; Flammability-2; Reactivity-0; Personal Protection-B	
Manufactured For: Hillyard Industries, Inc.		DOT Hazard Classification: ORM-D	
Address: 302 N. 4 <sup>th</sup> Street		Identity (trade name as used on label):	
Address: St. Joseph, MO 64501		I-Force Gear, Chain & Cable Lubricant (# HIL0110254)	
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com		MSDS Number: 352 Revision- 1	
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300		Date Prepared: 10/07/93 Prepared By: DL/KD	
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA		Information Calls: (770)422-2071	

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PETROLEUM DISTILLATE	64742-47-8	No	100	100	d
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d
PETROLEUM OIL MIXTURE	8002-05-9	No	5mg/M3 TWA for oil mist	5mg/M3 TWA for oil mist	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H2O=1): Concentrate Only = 0.90
Vapor Pressure: PSIG @ 70°F (Aerosols): Max, 60	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate ( = 1): N/E
Solubility in Water: Insoluble	Water Reactive: No
Appearance and Odor: Silver color with aliphatic solvent odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) <b>FLAMMABLE</b>	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E      % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE	HAZARDOUS POLYMERIZATION <input type="checkbox"/> WILL <input checked="" type="checkbox"/> WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: CO, CO2, and various hydrocarbons.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> INGESTION <input type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE <input type="checkbox"/> NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.	
Eye Contact: Mild irritation.	Skin Contact: Mild irritation due to defatting of skin.
Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.	
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause elevated carboxyhemoglobin levels, eye damage, lung damage.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.	
Protective Gloves: Neoprene, if skin easily irritated.	Eye Protection: Safety glasses recommended.
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT
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# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

## IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-1; Flammability-1; Reactivity-0; Special-0		HMIS Rating: Health-1; Flammability-1; Reactivity-0; Personal Protection-B	
Manufactured For: Hillyard Industries, Inc.		DOT Hazard Classification: ORM-D	
Address: 302 N. 4 <sup>th</sup> Street		Identity (trade name as used on label):	
Address: St. Joseph, MO 64501		I-Force Battery Cleaner & Protector (# HIL0110454)	
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com		MSDS Number: A00710	Revision- 7
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300		Date Prepared: 10/06/93	Prepared By: ES/KD
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA		Information Calls: (770)422-2071	

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): Concentrate Only = 1.040
Vapor Pressure: PSIG @ 70°F (Aerosols): Max. 60	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate ( = 1): N/E
Solubility in Water: Complete	Water Reactive: No
Appearance and Odor: Bright red foamy spray with slight amine odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) <b>NON-FLAMMABLE</b>	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E      % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Acids & strong oxidizers.	Conditions to Avoid: Open flame, heat, sparks.
Hazardous Decomposition Products: CO, CO <sub>2</sub> & oxides of nitrogen.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [ X ] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.	
Eye Contact: Possible mild irritation.	Skin Contact: Mild irritant.
Ingestion: Possible chemical pneumonitis if aspirated into lungs.	
CHRONIC EFFECTS: None known.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.	
Protective Gloves: Rubber, if skin easily irritated.	Eye Protection: Safety glasses recommended.
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.



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## IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-1; Flammability-3; Reactivity-0; Special- -		HMIS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B	
Manufactured For: Hillyard Industries, Inc.		DOT Hazard Classification: ORM-D	
Address: 302 N. 4 <sup>th</sup> Street		Identity (trade name as used on label):	
Address: St. Joseph, MO 64501		I-Force White Lithium Grease (# HIL0110554)	
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com		MSDS Number: A00725	Revision- 13
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300		Date Prepared: 11/16/00	Prepared By: KD/IB
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA		Information Calls: (770) 422-2071	

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HEXANE	110-54-3	Yes	50	50	d
LITHIUM GREASE	7620-77-1	No	N/E	N/E	d
ISOBUTANE	75-28-5	No	800	800	d
PROPANE	74-98-6	No	1000	1000	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): Concentrate Only = .78
Vapor Pressure: PSIG @ 70°F (Aerosols): 46 psig	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate ( = 1): N/E
Solubility in Water: Nil	Water Reactive: No
Appearance and Odor: White with solvent odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) <b>EXTREMELY FLAMMABLE</b>	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	SPECIAL FIRE FIGHTING PROCEDURES: Use water fog to cool containers to prevent rupturing and bursting.	
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.	Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture. Provide shielding to protect personnel.	

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Oxygen & oxidants.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [ ] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [ X ] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Can cause headaches, dizziness.	
Eye Contact: Irritation	Skin Contact: Can cause skin defatting.
Ingestion: Possible chemical pneumonitis if aspirated into lungs.	
CHRONIC EFFECTS: None known.	
Medical Conditions Generally Aggravated by Exposure: Asthma.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): Not normally needed.	
Protective Gloves: Solvent resistant.	Eye Protection: Safety glasses.
Ventilation Requirements: Normal room ventilation.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water after contact.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Cover with absorbent material and sweep up. Wash area to prevent slipping. Incinerate or landfill according to local, state or federal regulations.
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# MATERIAL SAFETY DATA SHEET

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## IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special-B		HMIS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B	
Manufactured For: Hillyard Industries, Inc.		DOT Hazard Classification: ORM-D	
Address: 302 N. 4 <sup>th</sup> Street		Identity (trade name as used on label):	
Address: St. Joseph, MO 64501		I-Force Silicone Lubricant (# HIL0110654)	
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com		MSDS Number: A00325	Revision- 9
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300		Date Prepared: 08/22/01	Prepared By: ES/KD/RC
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA		Information Calls: (770)422-2071	

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HEXANE	110-54-3	Yes	50	50	d
POLYDIMETHYLSILOXANE	63148-62-9	No	N/E	N/E	d
CYCLOHEXANE	110-82-7	Yes	300	300	d
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): Concentrate Only = 0.695
Vapor Pressure: PSIG @ 70°F (Aerosols): Max.60	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate ( = 1): N/E
Solubility in Water: Insoluble	Water Reactive: No
Appearance and Odor: Clear colorless spray with solvent odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) EXTREMELY FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus. Use water fog to prevent rupturing & exploding containers. Provide shielding for personnel.	
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [ X ] INHALATION [ ] INGESTION [ X ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation.	
Eye Contact: Irritation.	Skin Contact: Irritation due to defatting of skin.
Ingestion: Possible chemical pneumonitis if aspirated into lungs.	
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation of hexane may cause nerve damage.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH in a positive pressure mode.	
Protective Gloves: Neoprene	Eye Protection: Safety glasses recommended.
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER. CAUTION: Silicone makes surfaces slippery.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.



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## IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-1; Flammability-3; Reactivity-0; Special- -	HMIS Rating: Health-1; Flammability-3; Reactivity-0; Personal Protection-B
Manufactured For: Hillyard Industries, Inc.	DOT Hazard Classification: ORM-D
Address: 302 N. 4 <sup>th</sup> Street	Identity (trade name as used on label):
Address: St. Joseph, MO 64501	I-Force Red Grease (# HIL0110754)
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com	MSDS Number: A00727 Revision- 10
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300	Date Prepared: 06/06/03 Prepared By: AH/IB
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA	Information Calls: (770) 422-2071

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PETROLEUM DISTILLATE	8002-05-9	No	500	500	d
ISOBUTANE	75-28-5	No	800	800	d
PROPANE	74-98-6	No	1000	1000	d
HEPTANE	142-82-5	No	500	500	d
ACETONE	67-64-1	No	1000	750	d
PARAFFINIC PETROLEUM DISTILLATE	64742-47-8	No	100	N/E	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): Concentrate Only = .81
Vapor Pressure: PSIG @ 70°F (Aerosols): 25-46 psig	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): ND	Evaporation Rate ( = 1): N/E
Solubility in Water: Nil	Water Reactive: No
Appearance and Odor: Red color with solvent odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) >18" w/flash back to tip: <b>EXTREMELY FLAMMABLE</b>	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E      % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	SPECIAL FIRE FIGHTING PROCEDURES: Use water fog to cool containers to prevent rupturing and bursting.	
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture. Provide shielding to protect personnel.		

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Oxygen & oxidants.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [X] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Can cause headaches, dizziness.	
Eye Contact: Irritation	Skin Contact: Can cause skin defatting.
Ingestion: Possible chemical pneumonitis if aspirated into lungs.	
CHRONIC EFFECTS: None known.	
Medical Conditions Generally Aggravated by Exposure: Asthma.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

<b>Respiratory Protection (specify type):</b> Not normally needed. If TLV is exceeded, use respirator approved by NIOSH for organic vapors.	
<b>Protective Gloves:</b> Solvent resistant.	<b>Eye Protection:</b> Safety glasses.
<b>Ventilation Requirements:</b> Normal room ventilation is sufficient with periodic use. For continuous spray, local exhaust provided by explosion proof motor is recommended.	
<b>Other Protective Clothing &amp; Equipment:</b> None required. Eyewash station suggested.	
<b>Hygienic Work Practices:</b> Wash with soap and water after contact.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Cover with absorbent material and sweep up. Wash area to prevent slipping. Incinerate or landfill according to local, state or federal regulations.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

\*\* Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data O



# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

## IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-0; Reactivity-0; Special-0	HMIS Rating: Health-2; Flammability-0; Reactivity-0; Personal Protection-B
Manufactured For: Hillyard Industries, Inc. Address: 302 N. 4 <sup>th</sup> Street Address: St. Joseph, MO 64501	DOT Hazard Classification: ORM-D Identity (trade name as used on label): <b>I-Force Safety Solvent</b> <b>(# HIL0110854)</b>
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com	MSDS Number: A00365 Revision- 14
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300	Date Prepared: 10/22/97 Prepared By: LF/DL
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA	

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
TRICHLOROETHYLENE	79-01-6	Yes	50	50	b
PERCHLOROETHYLENE	127-18-4	Yes	25	25	a,b
ACETONE	67-64-1	No	1000	750	d
CARBON DIOXIDE	124-38-9	No	5000	5000	d
<b>WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer.</b>					

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): Concentrate Only = 1.60
Vapor Pressure: PSIG @ 70°F (Aerosols): 85-100	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate (n-butyl acetate= 1): 2.1 (concentrate only)
Solubility in Water: Insoluble	Water Reactive: No
Appearance and Odor: Clear, colorless spray with chlorinated solvent odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) <b>NON-FLAMMABLE</b>	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E                      % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Reactive metals, aluminum, magnesium, strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat.
Hazardous Decomposition Products: CO <sub>2</sub> , CO, HCl, small amounts of phosgene and chlorine.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [ X ] INHALATION [ ] INGESTION [ X ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS:	
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.	
Eye Contact: Irritation	Skin Contact: Irritation due to defatting of skin.
Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.	
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause liver abnormalities, kidney, spleen, lung or brain damage, cardiac abnormalities. Perchloroethylene has been shown to increase the rate of spontaneously occurring malignant tumors in certain laboratory rats and mice.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.
Protective Gloves: Neoprene gloves recommended.
Eye Protection: Safety glasses recommended.
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.
Other Protective Clothing & Equipment: None
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. Allow to evaporate if small spill. DO NOT FLUSH TO SEWER.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid inhalation of vapors.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

\*\* Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only



# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

## IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special- --		HMIS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B	
Manufactured For: Hillyard Industries, Inc.		DOT Hazard Classification: ORM-D	
Address: 302 N. 4 <sup>th</sup> Street		Identity (trade name as used on label):	
Address: St. Joseph, MO 64501		I-Force Contact & Circuit Cleaner (# HIL0110954)	
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com		MSDS Number: A00368	Revision-5
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300		Date Prepared: 12-07-01	Prepared By: CH/TR
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA		Information Calls: (770)422-2071	

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
ISOPROPANOL	67-63-0	No	400	400	d
2-METHYLPENTANE	107-83-5	No	500	500	d
3-METHYLPENTANE	96-14-0	No	500	500	d
2,3 DIMETHYLBUTANE	79-29-8	No	500	500	d
2,2 DIMETHYLBUTANE	75-83-2	No	500	500	d
CARBON DIOXIDE	124-38-9	No	5000	5000	d
n-HEXANE	110-54-3	Yes	50	50	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): Concentrate Only = 0.667
Vapor Pressure: PSIG @ 70°F (Aerosols): 80-100	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate ( = 1): N/E
Solubility in Water: None	Water Reactive: No
Appearance and Odor: Clear forceful spray with aliphatic solvent odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) EXTREMELY FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E      % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [ X ] INHALATION [ ] INGESTION [ X ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation.	
Eye Contact: Slight irritation.	Skin Contact: Slight irritation due to defatting of skin.
Ingestion: Irritation.	
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation may result in central nervous system effects.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH approved for organic vapor.	Eye Protection: Safety glasses recommended.
Protective Gloves: Neoprene	Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

\*\* Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only



# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION	
NFPA Rating: Health-2; Flammability-0; Reactivity-0; Special-0 Manufactured For: Hillyard Industries, Inc. Address: 302 N. 4 <sup>th</sup> Street Address: St. Joseph, MO 64501 Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com	HMIS Rating: Health-2; Flammability-0; Reactivity-0; Personal Protection-B DOT Hazard Classification: ORM-D Identity (trade name as used on label): <b>I-Force Penetrating Lubricant</b> (# HIL0111054) MSDS Number: A00391 Revision- 14 Date Prepared: 10/11/95 Prepared By: ES/AH Information Calls: (770)422-2071
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300 NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA	

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION					
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
TRICHLOROETHYLENE	79-01-6	Yes	50	50	b
PERCHLOROETHYLENE	127-18-4	Yes	25	25	a,b
PETROLEUM DISTILLATE	64742-54-7	Yes	5mg\M3	5mg\M3	d
BARIUM PETROLEUM SULFONATE	61760-48-5	Yes	5mg\M3	5mg\M3	d
<b>WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer.</b>					

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS	
Boiling Point: N/A	Specific Gravity (H2O=1): Concentrate Only = 1.44
Vapor Pressure: PSIG @ 70°F (Aerosols): 85-100	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate ( n-butyl acetate= 1): 2.1 (concentrate only)
Solubility in Water: Insoluble	Water Reactive: No
Appearance and Odor: Light brown color with chlorinated solvent odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA		
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) NON-FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A		EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

SECTION 4 - REACTIVITY HAZARD DATA	
STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Reactive metals, aluminum, magnesium, strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat.
Hazardous Decomposition Products: CO2, CO, HCl, small amounts of phosgene and chlorine.	

SECTION 5 - HEALTH HAZARD DATA	
PRIMARY ROUTES OF ENTRY: [ X ] INHALATION [ ] INGESTION [ X ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS:	
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.	
Eye Contact: Irritation	Skin Contact: Irritation due to defatting of skin.
Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.	
CHRONIC EFFECTS:(Effects due to excessive exposure to the raw materials of this mixture) May cause liver abnormalities, kidney, spleen, lung or brain damage, cardiac abnormalities. Perchloroethylene has been shown to increase the rate of spontaneously occurring malignant tumors in certain laboratory rats and mice.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

EMERGENCY FIRST AID PROCEDURES	
Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.	
Skin Contact: Wash with soap and water. If irritated, seek medical attention.	
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.	
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.	

SECTION 6 - CONTROL AND PROTECTIVE MEASURES	
Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.	
Protective Gloves: Neoprene gloves recommended.	Eye Protection: Safety glasses recommended.
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE	
Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. Allow to evaporate if small spill. DO NOT FLUSH TO SEWER.	
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.	
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.	
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN.Avoid food contamination. Avoid inhalation of vapors.	

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

\*\* Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

THIS MSDS IS CURRENT AS OF September 10, 2002. The DATE PREPARED section is the original date assembled and remains current until a change is necessary. This is tracked internally at the manufacturer by these date codes and therefore must remain as the originating date.



# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

## IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-1; Flammability-1; Reactivity-0; Special-	HMIS Rating: Health-1; Flammability-1; Reactivity-0; Personal Protection-B
Manufactured For: Hillyard Industries, Inc. Address: 302 N. 4 <sup>th</sup> Street Address: St. Joseph, MO 64501	DOT Hazard Classification: ORM-D Identity (trade name as used on label): <b>I-Force Decal &amp; Adhesive Remover</b> <b>(# HIL0111254)</b>
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com	MSDS Number: A00364 Revision- 4
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300	Date Prepared: 03/22/93 Prepared By: ES
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA	Information Calls: (770)422-2071

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
MONOCYCLIC TERPENE	5989-27-5	No	N/E	N/E	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): Concentrate Only = .84
Vapor Pressure: PSIG @ 70°F (Aerosols): Max. 50	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): 8	Evaporation Rate ( = 1): N/E
Solubility in Water: Negligible	Water Reactive: No
Appearance and Odor: Thin clear liquid with citrus fragrance.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) NON-FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	SPECIAL FIRE FIGHTING PROCEDURES: Use water fog to cool container to prevent rupturing and bursting.	
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.	Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture. Provide shielding to protect personnel.	

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Oxidants	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon dioxide.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [ ] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [ X ] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS:	
Inhalation: Can cause headache, dizziness.	
Eye Contact: Irritating	Skin Contact: Can cause skin defatting.
Ingestion: Possible chemical pneumonitis if aspirated into lungs.	
CHRONIC EFFECTS: None known.	
Medical Conditions Generally Aggravated by Exposure: Asthma.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): Not normally needed.	Eye Protection: Safety glasses recommended.
Protective Gloves: Solvent resistant	
Ventilation Requirements: Normal room ventilation.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water after contact.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Cover with absorbent material & scoop up. Flush area with water. Incinerate or landfill according to local, state or Federal regulations.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.



# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

## IDENTITY AND MANUFACTURER'S INFORMATION

<b>NFPA Rating:</b> Health-2; Flammability-3; Reactivity-0; Special-- <b>Manufactured For:</b> Hillyard Industries, Inc. <b>Address:</b> 302 N. 4 <sup>th</sup> Street <b>Address:</b> St. Joseph, MO 64501		<b>HMIS Rating:</b> Health-2; Flammability-3; Reactivity-0; Personal Protection-B <b>DOT Hazard Classification:</b> ORM-D <b>Identity</b> (trade name as used on label): <div style="text-align: center;"><b>I-Force Brake &amp; Parts Cleaner</b> (# HIL0111354)</div>
<b>Phone:</b> (816)-233-1321 ext. 8285 or http://www.hillyard.com <b>EMERGENCY RESPONSE NUMBER:</b> Chemtrec 1-800-424-9300 <b>NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA</b>		<b>MSDS Number:</b> A00732 <b>Revision-</b> 2 <b>Date Prepared:</b> 02/29/00 <b>Prepared By:</b> KD/CH <b>Information Calls:</b> (770)422-2071

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HEXANE	110-54-3	Yes	50	50	d
ACETONE	67-64-1	No	1000	750	d
CARBON DIOXIDE	124-38-9	No	5000	5000	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

<b>Boiling Point:</b> N/A	<b>Specific Gravity (H<sub>2</sub>O=1):</b> Concentrate Only = 0.728
<b>Vapor Pressure:</b> PSIG @ 70°F (Aerosols): 80-100	<b>Vapor Pressure (Non-Aerosols)(mm Hg and Temperature):</b> N/A
<b>Vapor Density (Air = 1):</b> N/E	<b>Evaporation Rate ( = 1):</b> N/E
<b>Solubility in Water:</b> None	<b>Water Reactive:</b> No
<b>Appearance and Odor:</b> Clear forceful spray with aliphatic/ketone solvent odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

<b>FLAMMABILITY</b> as per USA FLAME PROJECTION TEST (aerosols) <b>EXTREMELY FLAMMABLE</b>	<b>Auto Ignition Temperature</b> N/E	<b>Flammability Limits in Air by % in Volume:</b> % LEL: N/E      % UEL: N/E
<b>FLASH POINT AND METHOD USED (non-aerosols):</b> N/A		<b>EXTINGUISHER MEDIA:</b> Foam, dry chemical, carbon dioxide.
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b> Self-contained breathing apparatus.		
<b>Unusual Fire &amp; Explosion Hazards:</b> Do not expose aerosols to temperatures above 130°F or the container may rupture.		

## SECTION 4 - REACTIVITY HAZARD DATA

<b>STABILITY</b> [ X ] STABLE [ ] UNSTABLE	<b>HAZARDOUS POLYMERIZATION</b> [ ] WILL [ X ] WILL NOT OCCUR
<b>Incompatibility (Mat. to avoid):</b> Strong oxidizing agents.	<b>Conditions to Avoid:</b> Open flame, welding arcs, heat, sparks.
<b>Hazardous Decomposition Products:</b> Carbon dioxide, carbon monoxide.	

## SECTION 5 - HEALTH HAZARD DATA

<b>PRIMARY ROUTES OF ENTRY:</b> [ X ] INHALATION [ ] INGESTION [ X ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS	
<b>ACUTE EFFECTS</b>	
<b>Inhalation:</b> Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation.	
<b>Eye Contact:</b> Slight irritation.	<b>Skin Contact:</b> Slight irritation due to defatting of skin.
<b>Ingestion:</b> Irritation.	
<b>CHRONIC EFFECTS:</b> (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation may result in central nervous system effects.	
<b>Medical Conditions Generally Aggravated by Exposure:</b> May aggravate existing eye, skin, or upper respiratory conditions.	

## EMERGENCY FIRST AID PROCEDURES

<b>Eye Contact:</b> Flush with water for 15 minutes. If irritated, seek medical attention.
<b>Skin Contact:</b> Wash with soap and water. If irritated, seek medical attention.
<b>Inhalation:</b> Remove to fresh air. Resuscitate if necessary. Get medical attention.
<b>Ingestion:</b> DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

<b>Respiratory Protection (specify type):</b> If vapor concentration exceeds TLV, use respirator approved by NIOSH approved for organic vapor.	
<b>Protective Gloves:</b> Neoprene	<b>Eye Protection:</b> Safety glasses recommended.
<b>Ventilation Requirements:</b> Adequate ventilation to keep vapor concentration below TLV.	
<b>Other Protective Clothing &amp; Equipment:</b> None	
<b>Hygienic Work Practices:</b> Wash with soap and water before handling food.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE



# MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

## IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special- -	HMIS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B
Manufactured For: Hillyard Industries, Inc.	DOT Hazard Classification: ORM-D
Address: 302 N. 4 <sup>th</sup> Street	Identity (trade name as used on label):
Address: St. Joseph, MO 64501	I-Force Penetrating Lubricant NC (# HIL0111454)
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com	MSDS Number: A00393 Revision- 10
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300	Date Prepared: 05/27/03 Prepared By: AH/IB
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA	Information Calls: (770) 422-2071

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PETROLEUM DISTILLATE	64742-47-8	No	NE	NE	d
ALIPHATIC PETROLEUM DISTILLATE	8052-41-3	No	100	100	d
PETROLEUM OIL	64742-53-6	No	5mg/M3	5mg/M3	d
ISOBUTANE / PROPANE BLEND	74-98-6	No	1000	1000	d
	75-28-5	No	800	800	d

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): Concentrate Only = .79
Vapor Pressure: PSIG @ 70°F (Aerosols): Max. 60	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate ( = 1): N/E
Solubility in Water: Insoluble	Water Reactive: No
Appearance and Odor: Light straw spray with aliphatic solvent odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols: greater than 18 " with flashback to tip.	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
EXTREMELY FLAMMABLE		
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

## SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [ X ] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [ X ] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: CO, CO <sub>2</sub> , unknown oxides of carbon, as well as trace amounts of fluorides, phosphides and zinc.	

## SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [ X ] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.	
Eye Contact: Mild irritation.	Skin Contact: Mild irritation due to defatting of skin.
Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.	
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause eye damage, lung damage, dermatitis.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

## EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for at least 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash affected areas with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH/MSHA for organic vapor.	Eye Protection: Safety glasses recommended.
Protective Gloves: Neoprene, if skin easily irritated.	
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: Eyewash station recommended.	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb spilled liquid with inert material. Place in closed drum for proper disposal. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Remove ignition sources.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

\*\* Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only.