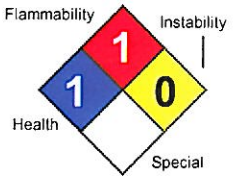
MATERIAL SAFETY DATA SHEET
Klean Strip Rust Converter

HEALTH	*	1
FLAMMABILITY		1
PHYSICAL HAZ.		1
PPE		X



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1. Product and Company Identification

Product Code: 402.7
Product Name: Klean Strip Rust Converter
Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Dept (901)775-0100
Intended Use: Turns rust to black primer and inhibits further corrosion.
Synonyms
WRC22

2. Hazards Identification

Emergency Overview
Caution! May cause irritation to skin and eyes.
OSHA Regulatory Status:
This material is classified as hazardous under OSHA regulations.
Health Hazards (Acute and Chronic)
Inhalation Acute Exposure Effects:
May cause irritation of the respiratory tract, including mucous membranes and nasal passages.

Skin Contact Acute Exposure Effects:
May cause irritation and drying of the skin.

Eye Contact Acute Exposure Effects:
May cause redness, tearing, and irritation.

Ingestion Acute Exposure Effects:
May cause gastrointestinal irritation, nausea, abdominal pain, vomiting, and diarrhea.

Chronic Exposure Effects:
May cause mild bronchial irritation. Overexposure to Diethylene Glycol Monomethyl Ether has apparently been found to cause the following effects in laboratory animals: kidney damage, liver abnormalities, and testis damage.

Target Organs: liver, respiratory tract, kidney, blood
Signs and Symptoms Of Exposure
Primary Routes of Exposure:
Inhalation, ingestion, and dermal.

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, and respiratory system.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration
1. Barium sulfate {(EXEMPT FROM SECTION 313)} {C.I. Pigment white 21; Mineral white; Permanent white}	7727-43-7	10.0 -15.0 %
2. Tannic acid	1401-55-4	5.0 -10.0 %
3. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	1.0 -5.0 %
4. Ethylene glycol	107-21-1	1.0 -5.0 %

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be reached.

Skin Contact:

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Call your poison control center, hospital emergency room, or physician immediately for instructions.

Note to Physician

Call your local poison control center for further instructions.

5. Fire Fighting Measures

Flammability Classification: No Flashpoint

Flash Pt: NE

Explosive Limits: LEL: No data. UEL: No data.

Special Fire Fighting Procedures

Material is non-combustible, no special procedures required. As in any fire, self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas.

Unusual Fire and Explosion Hazards

No data available.

Hazardous Combustion Products

If material is involved in a fire, combustion may produce carbon monoxide, carbon dioxide, alcohols, aldehydes, ethers, and toxic fumes.

Suitable Extinguishing Media

Non-combustible liquid - use extinguishing media for underlying cause of fire.

Unsuitable Extinguishing Media

None known.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean Up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Keep out of sewers, waterways, and bodies of water.

For small spills, take up liquid with sand, earth, or other noncombustible absorbent material and place in a container for disposal.

For large spills, dike far ahead of spill and use sand, earth, or other noncombustible absorbent material and then place material in a container for disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse the container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Protect from freezing. Avoid extreme high or low temperatures.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Barium sulfate {(EXEMPT FROM SECTION 313)} {C.I. Pigment white 21; Mineral white; Permanent white}	7727-43-7	PEL: 15 (dust); 5 (resp.) mg/m3	TLV: 10 mg/m3	No data.
2. Tannic acid	1401-55-4	No data.	No data.	No data.
3. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	PEL: 50 ppm	TLV: 20 ppm	No data.
4. Ethylene glycol	107-21-1	No data.	CEIL: 100 mg/m3 (H)	No data.

Respiratory Equipment (Specify Type)

Under normal use conditions and when used as directed, respiratory protection is not needed.

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors to keep vapors below applicable exposure limits. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury.

Protective Gloves

Wear gloves with as much resistance to the chemical ingredients as possible. Glove materials such as nitrile may provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use.

Ventilation

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or your experience slight dizziness, headache, nausea, or eye-watering - STOP - ventilation is inadequate. Leave area immediately.

Work/Hygienic/Maintenance Practices

Wash hands thoroughly after use and before eating, drinking, or smoking.

Do not eat, drink, or smoke in the work area.

Facilities storing or handling this material should be equipped with an emergency eyewash and safety shower.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Melting Point:	No data.
Boiling Point:	> 212.00 F
Autoignition Pt:	No data.
Flash Pt:	NE
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	1.3
Density:	10.45 LB/GL
Bulk density:	No data.
Vapor Pressure (vs. Air or mm Hg):	< 1 MM HG
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.
Solubility in Water:	No data.
Percent Volatile:	N.D.
Heat Value:	No data.
Particle Size:	No data.
Corrosion Rate:	No data.
pH:	1.5 - 2.8

Appearance and Odor

milky off-white color and bland odor

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Strong oxidizing agents and strong bases.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide, carbon dioxide, aldehydes, ketones, and organic acids.

Possibility of Hazardous Reactions: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Reactions

No data available.

11. Toxicological Information

This product has not been tested as a whole. Information below will be for individual ingredients.

Barium Sulfate:
ACUTE TOXICITY: Inhaled fine dusts of barium sulfate form harmless nodular granules in the lungs, an affliction called baritosis. Baritosis produces no symptoms of bronchitis or emphysema, and lung function is not affected. This affliction has been shown to clear up after exposure ceases.
SKIN CORROSION / IRRITATION: May cause dryness and itching.
SERIOUS EYE DAMAGE / IRRITATION: May cause irritation.
RESPIRATORY OR SKIN SENSITIZATION: N/A
ASPIRATION HAZARD: N/A
MUTAGENIC DATA: No data.
IMMUNOTOXICITY: No data.
NEUROTOXICITY: No data.
DEVELOPMENTAL/REPRODUCTIVE: No data.
CARCINOGEN STATUS: Not a known human carcinogen.

Tannic Acid:
ACUTE TOXICITY: LD50, rat, oral, 2260 mg/kg
SKIN CORROSION / IRRITATION: May cause skin irritation.
SERIOUS EYE DAMAGE / IRRITATION: Causes eye irritation.
RESPIRATORY OR SKIN SENSITIZATION: No data.
ASPIRATION HAZARD: No data.
MUTAGENIC DATA: No data.
IMMUNOTOXICITY: No data.
NEUROTOXICITY: No data.
DEVELOPMENTAL/REPRODUCTIVE: No data.
CARCINOGEN STATUS: Not classifiable as to human carcinogenicity.

Ethylene Glycol:
ACUTE TOXICITY:
LD50 Rat oral 5.89 g/kg bw
LD50 Rabbit dermal 9530 mg/kg
Available data from acute poisoning cases indicate that the kidney is the critical organ for the toxicity of ethylene glycol.
SKIN CORROSION / IRRITATION: May cause skin irritation.
SERIOUS EYE DAMAGE / IRRITATION: Causes eye irritation.
RESPIRATORY OR SKIN SENSITIZATION: Although rare, contact may cause allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects).
ASPIRATION HAZARD: No data.
MUTAGENIC DATA: Ethylene glycol is teratogenic, inducing primarily skeletal and external malformations, sometimes at doses less than those that are maternally toxic, with mice being more sensitive than rats.
IMMUNOTOXICITY: Consistent treatment related effects on the immune system related parameters have not be observed in repeated dose toxicity studies, in which several species have been exposed to ethylene glycol either orally or by inhalation.

NEUROTOXICITY: Available data are inadequate to assess the potential adverse neurological or immunological effects associated with long term exposure to ethylene glycol, although neurobehavioral and neurological disorders have been reported in cases of acute ethylene glycol poisonings in humans. In the limited number of investigations examined, neurological effects have not been observed at doses below those that have induced renal toxicity.
DEVELOPMENTAL/REPRODUCTIVE: Ethylene glycol induces developmental effects in rats and mice by all routes of exposure, although at doses greater than those associated with renal effects in male rats. Reproductive studies with ethylene glycol show that in repeated dose toxicity studies, no evidence of an adverse impact on reproductive organs was observed.
CARCINOGEN STATUS: Not classifiable as a human carcinogen.

2-Butoxyethanol:
ACUTE TOXICITY:
LD50 Rat oral 470 - 3,000 mg/kg
LD50 Rabbit oral 0.32 g/kg
LD50 Rabbit dermal 400 mg/kg
LC50 Rat (male) inhalation 486 ppm/4 hr
SKIN CORROSION / IRRITATION: This chemical has moderate acute toxicity and it is irritating to the eyes and skin.
SERIOUS EYE DAMAGE / IRRITATION: May cause severe irritation and corneal injury.
RESPIRATORY OR SKIN SENSITIZATION: It is not a skin sensitizer.
ASPIRATION HAZARD: No data.
MUTAGENIC DATA: Although the results of in vitro tests for mutagenicity of 2-butoxyethanol were inconsistent, the absence of structural alerts and the negative findings from in vivo studies indicate that 2-butoxyethanol is not mutagenic.
IMMUNOTOXICITY: No data.
NEUROTOXICITY: No data.
DEVELOPMENTAL/REPRODUCTIVE: In animals, adverse effects on reproduction and development have not been observed at less than toxic doses. Did not cause birth defects in laboratory animals.
CARCINOGEN STATUS: No reliable human epidemiological studies are available that address the potential carcinogenicity. Confirmed animal carcinogen with unknown relevance to humans.

Chronic Toxicological Effects

This product has not been tested as a whole.

Carcinogenicity/Other Information

No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Barium sulfate {(EXEMPT FROM SECTION 313)} {C.I. Pigment white 21; Mineral white; Permanent white}	7727-43-7	n.a.	n.a.	n.a.	n.a.
2. Tannic acid	1401-55-4	n.a.	n.a.	n.a.	n.a.
3. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	Possible	2B	A3	No
4. Ethylene glycol	107-21-1	n.a.	n.a.	A4	n.a.

12. Ecological Information

No information available for this product as a whole. Information is for individual ingredients.

Barium Sulfate:
TOXICITY: No data.
PERSISTENCE AND DEGRADABILITY: No data.
BIOACCUMULATIVE POTENTIAL: No data.
MOBILITY IN SOIL: No data.
OTHER ADVERSE EFFECTS: No data.

Tannic Acid:
TOXICITY: No data.
PERSISTENCE AND DEGRADABILITY: No data.
BIOACCUMULATIVE POTENTIAL: No data.
MOBILITY IN SOIL: No data.
OTHER ADVERSE EFFECTS: No data.

Ethylene Glycol:
TOXICITY:
PERSISTENCE AND DEGRADABILITY: Ethylene glycol is biodegraded in soil 97-100% in 2-12 days. Vapor-phase ethylene glycol will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 2 days.
BIOACCUMULATIVE POTENTIAL: If released into water, ethylene glycol is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. A BCF of 10, reported for ethylene glycol in fish, Golden ide (Leuciscus idus melanotus), after 3 days of exposure suggests the potential for bioconcentration in aquatic organisms is low.
MOBILITY IN SOIL: Expected to have very high mobility based upon an estimated Koc of 1.
OTHER ADVERSE EFFECTS: No data.

2-Butoxyethanol:
Toxicity: Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).
LC50, rainbow trout, 96 hr, 1,700 mg/L
LC50, water flea, 835 mg/L
LC50, bacteria, >1,000 mg/L
Persistence and Degradability: Material is readily biodegradable.
Bioaccumulative Potential: Bioconcentration potential is low (BCF <100 or LOG POW <3).
Mobility in Soil: Potential for mobility in soil is high (KOC between 50 and 150).
Other Adverse Effects: No data.

13. Disposal Considerations

Waste Disposal Method

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

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Not Regulated by D.O.T.

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Barium sulfate {(EXEMPT FROM SECTION 313)} {C.I. Pigment white 21; Mineral white; Permanent white}	7727-43-7	No	No	Yes-Cat. N040	Yes
2. Tannic acid	1401-55-4	No	No	No	No
3. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	No	No	Yes-Cat. N230	No
4. Ethylene glycol	107-21-1	No	Yes 5000 LB	Yes	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Barium sulfate {(EXEMPT FROM SECTION 313)} {C.I. Pigment white 21; Mineral white; Permanent white}	7727-43-7	HAP, ODC ()	No	Inventory	No
2. Tannic acid	1401-55-4	HAP, ODC ()	No	Inventory	No
3. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	HAP, ODC ()	No	Inventory	No
4. Ethylene glycol	107-21-1	HAP, ODC ()	No	Inventory	No

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[X] Yes [ ] No Acute (immediate) Health Hazard
[X] Yes [ ] No Chronic (delayed) Health Hazard
[ ] Yes [X] No Fire Hazard
[ ] Yes [X] No Sudden Release of Pressure Hazard
[ ] Yes [X] No Reactive Hazard

16. Other Information

NE: Not Established