

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

Name of the Product: Brut
Product Code: FG0117
Product Use: Stripping Solution
Producer:

Perma Incorporated
605 Springs Road
Bedford, MA 01730

Telephone Number for Information - (978) 667-5161
Emergency Phone Number - (800) 255-3924 ChemTel Inc.

SECTION II – HAZARD(s) IDENTIFICATION

GHS Classification:

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1

GHS Label Elements:

Signal Word: Warning
Symbol: Corrosive

Hazard Statement:

Causes skin irritation.
Causes serious eye irritation.

Precautionary Statements:

Wash hands and any exposed skin thoroughly after handling.
Keep container tightly closed when not in use.
No smoking.
Wear protective gloves and eye/face protection.
Avoid contact with skin, eyes or clothing.
Store in a cool well-ventilated area.
Avoid release to the environment.

Other Information:

Harmful if swallowed.
Inhalation of vapors may cause respiratory irritation.
Keep out of reach of children.

SECTION III – Composition/Information on Ingredients

Component	CAS#	Weight (%)
Potassium Hydroxide	1310-58-3	2 - 4
Sodium Hydroxide	1310-73-3	5 - 10
2-aminoethanol	141-43-5	5 - 10
2-butoxyethanol	111-76-2	5 - 10
Tetrahydro-2-furanmethanol	97-99-4	3 - 5

SECTION IV – FIRST AID MEASURES

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

Eye Contact: Move individual away from exposure. Immediately flush eyes with large quantities of clean water for at least 15 minutes. Get immediate medical attention.

Ingestion: DO NOT INDUCE VOMITING. This material may enter the lungs during vomiting. Never give anything by mouth to an unconscious person. GET IMMEDIATE MEDICAL ATTENTION.

Inhalation: If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet. GET IMMEDIATE MEDICAL ATTENTION.

SECTION V – FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Hazardous Combustion Products: May include carbon monoxide, carbon dioxide and other toxic gasses or vapors.

Fire/Explosion Hazard: None known.

Protective Equipment & Precautions for Firefighters: Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Use water spray to cool fire-exposed containers.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Personal Precautions: Depending on the extent of release, consider the need for fire fighters/emergency responders with adequate personal protective equipment for cleaning up. Do not eat, drink or smoke while cleaning up. Use a self-contained respirator, a mask with filter or a filtering mask. Wear protective clothing, safety glasses and impervious gloves (e.g. neoprene gloves). Ensure adequate ventilation. Avoid all sources of ignition: hot surfaces and open flames (see also section 7).

Environmental Precautions: Prevent spills from entering storm sewers or drains and contact with soil.

Methods for Cleaning Up:

Small Spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up. Dispose of via a licensed waste disposal contractor.

Large Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or other confined areas. Contain and collect spillage with absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazards as the spilled product. Note, see section 1 for emergency contact information and section 13 for waste disposal.

SECTION VII – HANDLING AND STORAGE

Precautions for Safe Handling: Put on appropriate personal protective equipment. Do not get in eyes, skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container, tightly closed, when not in use. Keep away from acids. Empty containers retain product residue and can be dangerous. Do not reuse container.

Advice on General Occupational Hygiene: Eating, drinking and smoking should be prohibited in areas where this product is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional hygiene measures.

SECTION VIII – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Potassium Hydroxide 1310-58-3

ACGIH	threshold limit value	2 mg/m ³
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Sodium Hydroxide 1310-73-3

ACGIH	short term exposure limit	2 mg/m ³
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ACGIH	threshold limit value	2 mg/m ³
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OSHA	permissible exposure limit	2 mg/m ³
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2-aminoethanol 141-43-5

ACGIH	time weighted average	3 ppm
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ACGIH	short term exposure limit	6 ppm
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OSHA Z1	time weighted average	3 ppm
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OSHA Z1	time weighted average	6 mg/m ³
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NIOSH	time weighted average	3 ppm
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NIOSH	time weighted average	8 mg/m ³
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2-butoxyethanol 111-76-2

OSHA	permissible exposure limit	50 ppm
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ACGIH	threshold limit value	25 ppm
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Tetrahydro-2-furanmethanol 97-99-4

WEEL	time weighted average	0.5 ppm
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Appropriate Engineering Controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Exposure Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure levels below TLV(s).

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.

8 hours (breakthrough time): butyl rubber

Body Protection: Personal protective equipment for the body should be selected based on the task performed and the risks involved. All protective should be approved by a specialist before handling this product. A safety apron is recommended when using this product.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: natural rubber (latex)

SECTION IX – PHYSICAL PROPERTIES

Appearance	Blue
Odor	Detergent
Odor Threshold	Not available
Physical State	Liquid
pH	13.5 - 14.5
Flash Point (TCC)	Not applicable. Product does not sustain combustion.
Flammability (solid, gas)	Not available
Lower and Upper Explosive Limits	Not available
Vapor Pressure	14.0 mmHg
Vapor Density	1.2
Relative Density	1.04
Solubility	Water soluble
Partition coefficient:	Not available
Auto-Ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	10 - 20 cps. @ 25°C

SECTION X – STABILITY AND REACTIVITY

Stability: This product is stable under normal conditions.

Conditions to Avoid: Heat, open flames, sparks and other ignition sources.

Incompatible Products: Avoid contact with strong acids or strong oxidizing agents.

Hazardous Decomposition: May include carbon monoxide, carbon dioxide and other toxic gasses and vapors.

Hazardous Reactions: Not expected to occur with normal handling and storage.

SECTION XI – TOXICOLOGICAL INFORMATION

Acute Toxicity:

Potassium Hydroxide 1310-58-3

Oral LD50 Rat: 333 mg/kg

Sodium Hydroxide 1310-73-3

Oral LD50 Rat: 222 mg/kg

Inhalation LD50 Mouse: 40 mg/kg

Dermal LD50 Rabbit: 1,350 mg/kg

2-aminoethanol 141-43-5

Oral LD 50 Rat: 1,515 mg/kg

Inhalation LC50 Rat: > 1.3 mg/l

Dermal LD50 Rabbit: 1,100 mg/kg

2-butoxyethanol 111-76-2

Oral LD50 Rat: 745 mg/kg

Inhalation LC50 Rat: 550 ppm, 4 h

Dermal LD50 Rat: 1,250 mg/kg

Tetrahydro-2-furanmethanol 97-99-4

Oral LD50 Rat: > 2,000 mg/kg

Chronic Toxicity:

No component of this product, present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen or potential carcinogen by NTP, OSHA and or IARC.

Reproductive Toxicity:

For similar material(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Target Organs:

Eyes, skin, central vascular system, kidney, liver, central nervous system

SECTION XII – Ecological Information

Aquatic Toxicity:

Potassium Hydroxide 1310-58-3

LC50 *Gambusia affinis* (Mosquito fish) 80 mg/l, 96h static

2-aminoethanol 141-43-5

EC50 Haptophyte-*Isochrysis galbana* (Algae) 80000 ug/l, 96h static

LC50 Crustaceans (Common shrimp, sand shrimp) > 100,000 ug/l, 48h static

LC50 Fish: Rainbow trout, donaldson trout 150 mg/l, 96h static

EC50 *Daphnia magna* (Water flea) > 1,000 mg/l, 48h semi-static

2-butoxyethanol 111-76-2

LC50 *Oncorhynchus mykiss* (Rainbow trout) 1474 mg/l, 96h static

EC50 *Daphnia magna* (Water flea) 1800 mg/l, 48h static

EC50 *Pseudokirchneriella subcapitata* (Green algae) 911 mg/l, 72h static

Tetrahydro-2-furanmethanol 97-99-4

LC50 *Oryzias latipes* (Japanese rice fish) > 101 mg/l, 96h static

EC50 Daphnia magna (Water flea) > 91.7 mg/l, 48h semi-static
EC50 Selenastrum capricornutum (green algae) > 98.9 mg/l, 72h static

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Dispose of in accordance with all applicable local, state and federal regulations. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your local State Water Board or Regional Office of the EPA.

SECTION XIV – TRANSPORTATION INFORMATION

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. Dangerous goods descriptions may not reflect end-use or region-specific exceptions that can be applied. For additional information, please contact the distributor listed in section 1 of this SDS.

Quantities < 0.3 gal. (1L)

UN3267, Corrosive liquid
Basic organic solution
n.o.s. (Contains Sodium Hydroxide) 8
PG II, limited quantity
Limited quantity mark required 49 CFR 172.315
No UN packaging or shipping document required 49 CFR 173.154

Quantities > 0.3 gal. (1L)

UN3267, Corrosive liquid
Basic organic solution
n.o.s. (Contains Sodium Hydroxide) 8
PG II
Corrosive label and UN packaging required
49 CFR 173.202

SECTION XV – REGULATORY INFORMATION

TSCA Inventory Status: All chemical substances in this product are included on or are exempted from listing on the US Toxic Substances Control Act (TSCA) inventory.

Canadian Inventory Status: This material contains components that are NOT listed on the Canadian Domestic Substances List (DSL).

US Federal Regulations:

Section 313 of Title III of the Superfund Amendments and Reauthorization ACT of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	CAS#	Weight (%)	SARA 313 Status
2-butoxyethanol	111-76-2	5 - 10	Listed

SARA 311/312 Hazardous Categorization

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

TSCA 12(b) – Export Notification:

This material does not contain any components that are subject to the US Toxic Substances Control act (TSCA) section 12(b) Export Notification requirements.

Clean Air Act, Section 12 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any reportable HAPs.

Chemical Weapons Convention (CWC):

This product does not contain any listed substances.

California Proposition 65: This product contains no listed substances known to the state of California to cause cancer, birth defects or other reproductive harm, at levels which require reporting under the state statute.

SECTION XVI – OTHER INFORMATION

HMIS Rating: Health 2
 Flammability 0
 Reactivity 0
Prepared By: David Sadlo
Preparation Date: September 3, 2015

The information herein is based on data considered to be accurate. However, no warranty is expressed or implied regarding the accuracy of these data or results. Also this shall not establish a legally valid contractual relationship.

Vendor assumes no responsibility for injury to vendee or third person proximately caused if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in use of the material.

Our products are intended for sale to industrial and commercial customers. We encourage customers to inspect and test our products before use and to satisfy themselves as to suitability for their specific applications.

Warranty: The manufacturer warrants that products sold comply with specifications as represented and will perform satisfactorily if used according to the directions, or the manufacturer will refund or replace any unused portion thereof, for a period of one year from the date of manufacture. The manufacturer does not make any other warranty, or assume responsibility of any kind, expressed or implied regarding the effect or result of the products use; and assumes no responsibility of injury to vendee or third parties proximately caused by the material if reasonable safety procedures are not adhered to.

