

MATERIAL SAFETY DATA SHEET

NAME: BRAUN ENERGY CELL/BUTANE REFILL

CAS NO: NA

Effective Date: 4/8/03

Updated: 3/3/11

Rev: 4

A. — IDENTIFICATION

<u>Composition*</u> Isobutane (75-28-5)	<u>%</u>	Formula: C ₄ H ₁₀
		Molecular Weight: 58.12
		Synonyms: Refills for Braun Curling Iron/Brushes

B. — PHYSICAL DATA

Boiling Point 10 °F -12 °C	Melting Point -254 °F -159 °C	Freezing Point NA °F NA °C
Specific Gravity (H ₂ O=1) 0.564 @ 15/15°C (liquid)	Vapor Density (air=1) 2	Vapor Pressure @ NA mm Hg
Evaporation (NA =1)	Saturation in Air (by volume@ NA °F)	Autoignition Temperature 860 °F 460 °C
% Volatiles 100	Solubility in Water <0.1%	pH NA

Appearance/Odor Colorless gas (liquid under pressure) with little or no odor.

Flash Point and Test Method(s) -84°C, -120°F

Flammable Limits in Air (% by volume) Lower 1.8 % Upper 8.4 %

C. — REACTIVITY

Stability	<input checked="" type="checkbox"/> stable	<input type="checkbox"/> unstable	Polymerization	<input type="checkbox"/> may occur	<input checked="" type="checkbox"/> will not occur
<u>Conditions to Avoid</u> Extreme heat, sources of ignition.			<u>Conditions to Avoid</u> Not applicable		
<u>Incompatible Materials</u> Oxidizers			<u>Hazardous Decomposition Products</u> Thermal decomposition may produce carbon monoxide and other toxic by-products.		

* IF MULTIPLE INGREDIENTS, INCLUDE CAS NUMBERS FOR EACH

NA=NOT AVAILABLE

Footnotes

NA

D. — HEALTH HAZARD DATA

Occupational Exposure Limits PEL's, TLV's, etc.)

None for Isobutane. 8-Hour TWA for the related butane is: 800 ppm (OSHA/ACGIH).

This level is not anticipated under foreseeable use conditions.

Warning Signals

Not applicable

Routes/Effects of Exposure

1. Inhalation No adverse effects anticipated from normal use. If vapors are deliberately concentrated and inhaled (abuse), the following symptoms may occur: respiratory irritation, dizziness, drowsiness, headache, nausea, unconsciousness, cardiac sensitization, coma and death.
2. Ingestion No adverse effects anticipated from normal use.
3. Skin
 - a. Contact
No adverse effects anticipated from normal use.
 - b. Absorption
No adverse effects anticipated from normal use.
4. Eye Contact Irritation - Do not spray in eyes.
5. Other Not applicable

E. — ENVIRONMENTAL IMPACT

1. Applicable Regulations 49 CFR 172.101

2. DOT Hazard Class -	ORM-D	IATA - Gas cartridges (flammable) without a release
3. DOT Shipping Name -	Consumer Commodity	device, non-refillable UN2037

Environmental Effects

Not applicable

F. — EXPOSURE CONTROL METHODS

Engineering Controls

None under normal use conditions.

Eye Protection

None under normal use conditions.

Skin Protection

None under normal use conditions.

Respiratory Protection

None under normal use conditions.

Other

Product is non-hazardous when used as directed in an office/room with normal air circulation.
KEEP OUT OF REACH OF CHILDREN.

G. — WORK PRACTICES

Handling and Storage

The product is flammable. Do not use near heat, sparks, flame or while smoking. Use with adequate ventilation. Do not expose to heat or store at temperatures above 50°C (120°F). Storage in large quantities (as in warehouse) should be in a well-ventilated, cool area. Vapor is heavier than air and in confined spaces reduces oxygen available for breathing. Do not puncture or incinerate container, even when empty.

Normal Clean Up

None expected due to packaging. If a small amount of concentrate leaks through rupture, etc., allow to evaporate providing spark/static free ventilation.

Waste Disposal Methods

Do not puncture or incinerate. Dispose in accordance with applicable local, state and federal regulations.

H. — EMERGENCY PROCEDURES

Steps to be taken if material is released to the environment or spilled in the work area

Not applicable

Fire and Explosion Hazard

Flammable product. Container may rocket or explode in heat of fire.
Hazardous decomposition products. See Sec. C.

Extinguishing Media

As for adjacent fire. Dry chemical, foam, carbon dioxide, water fog.

Firefighting Procedures

In fires involving large quantities of product, self-contained breathing apparatus should be used. Fight fire from a distance or protected area. Cool and use caution when handling fire-exposed containers.

I. — FIRST AID AND MEDICAL EMERGENCY PROCEDURES**Eyes**

Flush with plenty of water. If irritation persists obtain medical attention.

Skin

Wash with soap and water.

Inhalation

No adverse effects anticipated from normal use. In abuse situation, remove from source of exposure. Treat symptomatically. Oxygen may be administered. Seek medical attention immediately and refer to "Notes to Physician" below.

Ingestion

Consult physician.

Notes to Physician

Cardiac sensitization to hydrocarbon propellant may occur. Do not use sympathomimetic agents (e.g. epinephrine) because of possible induction of ventricular fibrillation.

Replaces #1160, revision Section E.

The information contained in the Material Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.