

## Material Safety Data Sheet

### Section 1: Chemical Product and Company Information

**Identity:** Starna CellClean  
**Chemical Family:** Mixture  
**Chemical Use:** Concentrated Cleaning Solution  
**Cell Identity:** none

**Manufactured by:** Starna Scientific Ltd  
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Hainault,  
Essex,  
England.

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**Date of preparation:** 1 August 2007.

**Prepared by:** John P. Hammond CSci CChem FRSC



### Section 2: Composition

Ingredients (W/W)	CAS Number	EEC Hazard Identity	Concentration Range
Water	7732-18-5	-----	-----
Glycine, N,N'-1,2-ethanediybis-(N-(carboxymethyl)-,tetra-sodium salt	64-02-8	Xi, R-36, R-38	less than 20%
Benzenesulfonic acid, dimethyl-, ammonium salt	26447-10-9	Xi, R-36, R-38>	less than 20%
Benzenesulfonic acid, dodecyl-,cpd. With 2,2',2"-nitrilotris (ethanol)	27323-41-7	Xi, R-36, R-38	less than 20%
Poly(oxy-1,2-ethanediyl),alpha-(undecyl)-omega-hydroxy	34398-01-1	Xi, R-36	less than 20%>

### Section 3: Hazards Identification

**Emergency Overview:** Pale yellow aqueous solution with a slight ammonia odour. Non-flammable aqueous solution. NFPA rating of zero. No immediate hazards associated with the product.

**Route of Entry - Inhalation:** Prolonged or repeated contact may cause irritation.

**Route of Entry - Skin:** Prolonged or repeated contact may cause irritation.

**Route of Entry - Eye:** Prolonged or repeated contact may cause irritation.

**Route of Entry - Ingestion:** No hazard in normal industrial use.

**Health Hazard acute and chronic:** Not determined.

**Signs and symptoms of exposure:** Eye and or skin irritation (redness or swelling).

**Medical Conditions aggravated by exposure:** Not determined.

### Section 4: First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** No specific treatment is necessary since this material is not likely to be hazardous by ingestion.

**Skin Contact:** Remove contaminated clothing. Wash skin with soap and water. Seek medical attention if irritation develops or persists.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical attention if irritation develops or persists.

### Section 5: Fire Fighting Measures

**Suitable extinguishing agents:** Carbon Dioxide, extinguishing powder, or water jet.

**Protective equipment:** Wear full protective clothing, and a self-contained breathing apparatus

### Section 6: Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in section 8.

**Spill:** Collect using liquid absorber. Dispose of contaminated product by usual procedure.

### Section 7: Handling and Storage

**Handling:** Avoid contact with eyes, skin and clothing. Use in a well-ventilated area.

**Storage:** Store in a cool place in original container and protect from sunlight. Keep container closed when not in use. Use only stainless steel, polyethylene or plastic-lined containers for handling. Do not store in contact with aluminium, zinc, copper or their alloys.

**Storage Temperature:** - 5 to 43 °C.

### Section 8: Exposure Controls, Personal Protection

**Respiratory Protection:** For most situations, no respiratory protection should be needed.

**Ventilation:** Under normal use, good general ventilation should be sufficient to control airborne levels.

**Protective Gloves:** Chemical resistant gloves.

**Eye Protection:** Chemical resistant goggles, Contact lenses should not be worn.

**Other protective equipment:** Have immediate availability of eyewash.

## Section 9: Physical and Chemical Properties

**Appearance:** Yellow liquid.

**Odour:** Ammonia odour.

**pH (undiluted):** ca. 9.5

**Boiling Point:** 100 °C.

**Specific Gravity:** 1.135

**Vapour Pressure (mm Hg):** n/a.

**Melting Point:** 0 °C.

**Vapour Density:** n/a.

**Evaporation Rate:** n/a.

**Solubility in Water:** soluble.

**Fire and Explosion Hazard:**

**Flash point:** n/a.

**Flammable limits:** non-flammable.

## Section 10: Stability and Reactivity

**Stability:** stable under normal operating conditions.

**Conditions to avoid:** Avoid contact with incompatible materials if broken.

**Incompatible Materials:** May etch aluminium and zinc. Do not mix with other cleaners.

Mixing with chlorine-based cleaners may produce toxic gasses.

**Hazardous Decomposition Products:**

**Hazardous Polymerization:**

## Section 11: Toxicology Information

**Eye:** Irritant per USA-PHSA criteria. Not an irritant per OECD Guideline No. 405

**Skin:** Not an irritant per USA-PHSA criteria. Not an irritant per OECD Guideline No. 404

Oral, rat LD50 = greater than 5000 mg/kg.

## Section 12: Ecological Information

Contains no CFCs, ODCs, phosphates, silicates, borates, halogens, or phenols.

## Section 13: Disposal Considerations

Starna CellClean is not considered a hazardous waste under Federal Hazardous Waste Regulations 40 CFR 261. Please be advised, however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

Note: Chemical additions, processing or otherwise altering this material may make the waste management information presented on this MSDS incomplete, inaccurate, or otherwise inappropriate.

## Section 14: Transport Information

**Land transport ARD/RID and GGVS/GGVE (cross-border/domestic)**

**ADR/RID-GGVS/E Class:** None

**Maritime transport IMDG/GGVSea**

**IMDG/GGVSea Class:** None

**Air transport ICAO-TI and IATA-DGR**

**ICAO/IATA Class:** None

## Section 15: Regulatory information

Designed according to EC guidelines: Observe the normal safety regulations when handling chemicals. This 'sealed-cell' reference is not subject to classification according to EC lists and other sources of literature known to us. The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (German GefStoffV).

## Section 16: Other information

**Other:** none.

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