

JEFFOL® A 800

Version 1.1 Revision Date: 03/24/2017 SDS Number: 400001020120 Date of last issue: 10/27/2015
Date of first issue: 10/27/2015

SECTION 1. IDENTIFICATION

Product name : JEFFOL® A 800

Manufacturer or supplier's details

Company name of supplier : Huntsman Polyurethanes
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America (USA)
Telephone : Tech Info:(800) 257-5547

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Component of a Polyurethane System.
Industrial use

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Eye irritation : Category 2A

Skin sensitisation : Sub-category 1B

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse.
Storage:
 Not available
Disposal:
 P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards
 None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Ethylenediamine, ethoxylated and propoxylated	26316-40-5	90 - 100

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.

In case of skin contact : If on skin, rinse well with water.

In case of eye contact : Immediately flush eye(s) with plenty of water.
 Remove contact lenses.
 Protect unharmed eye.
 Keep eye wide open while rinsing.
 If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
 Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : None known.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : No data is available on the product itself.
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods : No data is available on the product itself.
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Neutralise with acid.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.
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SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not

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be employed in any process in which this mixture is being used.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : clear

Odour : slight

Odour Threshold : No data is available on the product itself.

pH : 11

Freezing point : No data is available on the product itself.

Melting point : No data is available on the product itself.

Boiling point : No data is available on the product itself.

SAFETY DATA SHEET

HUNTSMAN

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Flash point : 160 °C
Method: closed cup

Evaporation rate : No data is available on the product itself.

Flammability (solid, gas) : No data is available on the product itself.

Flammability (liquids) : No data is available on the product itself.

Upper explosion limit : No data is available on the product itself.

Lower explosion limit : No data is available on the product itself.

Vapour pressure : No data is available on the product itself.

Relative vapour density : No data is available on the product itself.

Relative density : 1.05

Density : No data is available on the product itself.

Solubility(ies)
Water solubility : No data is available on the product itself.

Solubility in other solvents : No data is available on the product itself.

Partition coefficient: n-octanol/water : No data is available on the product itself.

Auto-ignition temperature : No data is available on the product itself.

Thermal decomposition : No data is available on the product itself.

Self-Accelerating decomposition temperature (SADT) : No data is available on the product itself.

Viscosity
Viscosity, dynamic : 17,000 - 22,000 mPa.s (25 °C)

Viscosity, kinematic : 16190 - 20952 mm²/s (25 °C)

Explosive properties : No data is available on the product itself.

Oxidizing properties : No data is available on the product itself.

Molecular weight : 278 g/mol

Particle size : No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

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Possibility of hazardous reactions : No hazards to be specially mentioned.
Conditions to avoid : None known.
Incompatible materials : None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product : LD50 (Rat): 2,000 - 5,000 mg/kg

Acute inhalation toxicity : No data available

Acute dermal toxicity - Product : LD50 (Rabbit): 1,000 - 2,000 mg/kg

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation**Product:**

Species: Rabbit
Assessment: Irritant
Method: OECD Test Guideline 404
Result: irritating

Serious eye damage/eye irritation**Components:**

Ethylenediamine, ethoxylated and propoxylated:
Species: Rabbit
Result: Irritation to eyes, reversing after 7 to 21 days
Method: OECD Test Guideline 405
GLP: no

Species: Rabbit
Result: Mild eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitisation**Components:**

Ethylenediamine, ethoxylated and propoxylated:
Exposure routes: Skin
Species: Mouse
Method: OECD Test Guideline 429
Result: The product is a skin sensitiser, sub-category 1B.

Assessment: No data available

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Germ cell mutagenicity**Components:**

Ethylenediamine, ethoxylated and propoxylated:

Genotoxicity in vitro : Concentration: 5000 ug/plate
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 471
 Result: negative

Concentration: 2800 ug/plate
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 476
 Result: negative

Concentration: 2800 µg/L
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 473
 Result: negative

Genotoxicity in vivo : No data available

Carcinogenicity

No data available

Carcinogenicity - Assessment : No data available

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

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

NTP

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

Reproductive toxicity**Components:**

Ethylenediamine, ethoxylated and propoxylated:

Effects on fertility : Species: Rat, male and female
 Application Route: Oral
 Method: OECD Test Guideline 421
 Result: Animal testing did not show any effects on fertility.

Effects on foetal development : No data available

Reproductive toxicity - Assessment : No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

No data available

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information**Product:**

Remarks: No data available

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:**

Ethylenediamine, ethoxylated and propoxylated:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 25,600 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 203

Components:

Ethylenediamine, ethoxylated and propoxylated:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 103 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Components:

Ethylenediamine, ethoxylated and propoxylated:

Toxicity to algae : EC50: 150.67 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Marine water
Method: Directive 67/548/EEC, Annex V, C.3.

M-Factor (Acute aquatic toxicity) : No data available

Toxicity to fish (Chronic toxicity) : No data available

Components:

Ethylenediamine, ethoxylated and propoxylated:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): >= 10 mg/l
Exposure time: 21 d
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : No data available

Components:

Ethylenediamine, ethoxylated and propoxylated:

Toxicity to microorganisms : IC50 (activated sludge): > 10,000 mg/l
Exposure time: 3 h
Test Type: static test
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.11

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Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment
Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Persistence and degradability**Components:**

Ethylenediamine, ethoxylated and propoxylated:

Biodegradability : Concentration: 100 mg/l
Result: Not biodegradable
Biodegradation: 2 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.D.

Components:

Ethylenediamine, ethoxylated and propoxylated:

Biochemical Oxygen Demand (BOD) : 355 mg/g

Components:

Ethylenediamine, ethoxylated and propoxylated:

Chemical Oxygen Demand (COD) : 1,600 mg/g

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

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Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential

Bioaccumulation : No data available

Components:

Ethylenediamine, ethoxylated and propoxylated:
Partition coefficient: n-octanol/water : log Pow: -1.25 - 1.2 (25 °C)
pH: 12

Mobility in soil

Mobility : No data available

Components:

Ethylenediamine, ethoxylated and propoxylated:
Distribution among environmental compartments : Koc: ca. 1.58 Method: OECD Test Guideline 121
Stability in soil : No data available

Other adverse effects

Environmental fate and pathways : No data available

Results of PBT and vPvB assessment : No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound halogens (AOX) : No data available

Hazardous to the ozone layer

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information - Product : No data available

Global warming potential (GWP) : No data available

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SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

- Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
-

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA**

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**DOT Classification**Not regulated as dangerous goods

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****SARA 311/312 Hazards** : Acute Health Hazard**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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The components of this product are reported in the following inventories:

- CH INV : On the inventory, or in compliance with the inventory
- DSL : All components of this product are on the Canadian DSL
- AICS : On the inventory, or in compliance with the inventory
- NZIoC : Not in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- TCSI : On the inventory, or in compliance with the inventory
- TSCA : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

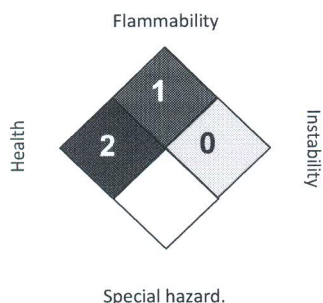
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.

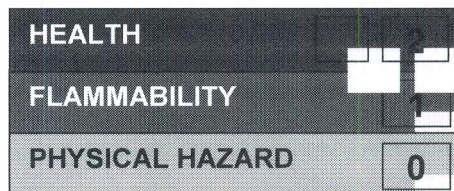
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

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The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

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IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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