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MATERIAL SAFETY DATA SHEET

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**3-Heptanone, 98%**  
00565

\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: 3-Heptanone, 98%

Synonyms:

Butyl Ethyl Ketone, Heptan-3-One

Company Identification: Acros Organics N.V.  
One Reagent Lane  
Fairlawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

| CAS#     | Chemical Name | %  | EINECS#   |
|----------|---------------|----|-----------|
| 106-35-4 | 3-Heptanone   | 98 | 203-388-1 |

Hazard Symbols: XN

Risk Phrases: 10 36 20

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

EMERGENCY OVERVIEW

Appearance: clear. Flash Point: 41 deg C.

Warning! Flammable liquid. May cause respiratory and digestive tract irritation. May cause eye and skin irritation.

Target Organs: None.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation:

May cause respiratory tract irritation. Vapors may cause dizziness or suffocation.

Chronic:

Not available.

## \*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

## Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

## Skin:

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

## Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

## Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

## Notes to Physician:

Treat symptomatically and supportively.

## \*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*

## General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable Liquid. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

## Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Use agent most appropriate to extinguish fire. Do NOT use straight streams of water.

Autoignition Temperature: 390 deg C ( 734.00 deg F)

Flash Point: 41 deg C ( 105.80 deg F)

NFPA Rating: health-1; flammability-2; reactivity-0

Explosion Limits, Lower: Not available.

Upper: Not available.

## \*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*

General Information: Use proper personal protective equipment as indicated in Section 8.

## Spills/Leaks:

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

## \*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*

## Handling:

Wash thoroughly after handling. Use only in a well ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue,

(liquid and/or vapor), and can be dangerous. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

#### Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.  
Flammables-area.

#### \*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

##### Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

##### Exposure Limits

| Chemical Name | ACGIH                                                     | NIOSH                                         | OSHA - Final PELs            |
|---------------|-----------------------------------------------------------|-----------------------------------------------|------------------------------|
| 3-Heptanone   | 50 ppm ; 234<br>mg/m3; (-) ppm<br>STEL; (-) mg/m3<br>STEL | 50 ppm TWA; 230<br>mg/m3 TWA 1000<br>ppm IDLH | 50 ppm TWA; 230<br>mg/m3 TWA |

##### OSHA Vacated PELs:

3-Heptanone:

50 ppm TWA; 230 mg/m3 TWA

##### Personal Protective Equipment

##### Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

##### Skin:

Wear appropriate protective gloves to prevent skin exposure.

##### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

##### Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

#### \*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

|                            |                               |
|----------------------------|-------------------------------|
| Physical State:            | Liquid                        |
| Appearance:                | clear                         |
| Odor:                      | fatty odor                    |
| pH:                        | Not available.                |
| Vapor Pressure:            | 5.5 hPa @ 20 C                |
| Vapor Density:             | 3.93                          |
| Evaporation Rate:          | Not available.                |
| Viscosity:                 | Not available.                |
| Boiling Point:             | 146.0 - 149.0 deg C @ 760.00m |
| Freezing/Melting Point:    | -39 deg C                     |
| Decomposition Temperature: | Not available.                |
| Solubility:                | Insoluble.                    |

Specific Gravity/Density: .8180g/cm3  
Molecular Formula: C7H14O  
Molecular Weight: 114.19

## \*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

## Chemical Stability:

Stable under normal temperatures and pressures.

## Conditions to Avoid:

Incompatible materials, ignition sources, excess heat, strong oxidants.

## Incompatibilities with Other Materials:

Oxidizing agents, reducing agents, bases.

## Hazardous Decomposition Products:

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

## \*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

## RTECS#:

CAS# 106-35-4: MJ5250000

## LD50/LC50:

CAS# 106-35-4: Oral, rat: LD50 = 2760 mg/kg; Skin, rabbit: LD50 = >20 gm/kg.

## Carcinogenicity:

3-Heptanone -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

## Epidemiology:

No data available.

## Teratogenicity:

No data available.

## Reproductive Effects:

No data available.

## Neurotoxicity:

No data available.

## Mutagenicity:

No data available.

## Other Studies:

No data available.

## \*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

## Ecotoxicity:

Not available.

## Environmental Fate:

Not available.

## Physical/Chemical:

Not available.

## Other:

Not available.

## \*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants:

None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Not listed as a material banned from land disposal

according to RCRA.

\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

US DOT

Shipping Name: KETONES, LIQUIDS, N.O.S.  
(3-HEPTANONE)

Hazard Class: 3

UN Number: UN1224

Packing Group: III

IMO

Shipping Name: KETONES, LIQUID, N.O.S.

Hazard Class: 3.3

UN Number: 1224

Packing Group: III

IATA

Shipping Name: KETONES, LIQUID, N.O.S.\*

Hazard Class: 3

UN Number: 1224

Packing Group: III

RID/ADR

Shipping Name: KETONES, LIQUID, N.O.S.

Dangerous Goods Code: 3(31C)

UN Number: 1224

Canadian TDG

No information available.

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

US FEDERAL

TSCA

CAS# 106-35-4 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

None of the chemicals in this material have an RQ.

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 106-35-4: acute, chronic, flammable.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

## STATE

3-Heptanone can be found on the following state right to know lists:  
California, New Jersey, Florida, Pennsylvania, Minnesota,  
Massachusetts.

California No Significant Risk Level:

None of the chemicals in this product are listed.

## European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 10 Flammable.

R 36 Irritating to eyes.

R 20 Harmful by inhalation.

Safety Phrases:

S 16 Keep away from sources of ignition - No  
smoking.

S 24 Avoid contact with skin.

S 33 Take precautionary measures against static  
discharges.

S 9 Keep container in a well-ventilated place.

WGK (Water Danger/Protection)

CAS# 106-35-4: 1

## Canada

CAS# 106-35-4 is listed on Canada's DSL/NDSL List.

WHMIS: Not available.

CAS# 106-35-4 is not listed on Canada's Ingredient Disclosure List.

## Exposure Limits

CAS# 106-35-4: OEL-AUSTRALIA:TWA 50 ppm (230 mg/m<sup>3</sup>). OEL-BELGIUM:TWA  
50 ppm (234 mg/m<sup>3</sup>). OEL-DENMARK:TWA 50 ppm (230 mg/m<sup>3</sup>). OEL-FINLAND:T  
WA 50 ppm (230 mg/m<sup>3</sup>);STEL 75 ppm (345 mg/m<sup>3</sup>). OEL-FRANCE:TWA 50 ppm (  
230 mg/m<sup>3</sup>). OEL-THE NETHERLANDS:TWA 50 ppm (230 mg/m<sup>3</sup>). OEL-THE PHILIP  
PINES:TWA 50 ppm (230 mg/m<sup>3</sup>). OEL-SWITZERLAND:TWA 50 ppm (230 mg/m<sup>3</sup>).  
OEL-UNITED KINGDOM:TWA 50 ppm (230 mg/m<sup>3</sup>);STEL 75 ppm. OEL IN BULGARIA  
, COLOMBIA, JORDAN, KOREA check ACGIH TLV. OEL IN NEW ZEALAND, SINGAPO  
RE, VIETNAM check ACGI TLV

## \*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 3/01/1994 Revision #3 Date: 5/22/1998

The information above is believed to be accurate and represents the best  
information currently available to us. However, we make no warranty of  
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