

Nadone®**000000011346**

Version 1.6

Revision Date 09/29/2016

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Nadone®

Number : 000000011346

Product Use Description : Solvent, Chemical-Technical application

Manufacturer or supplier's details : AdvanSix Inc.
115 Tabor Road
Morris Plains, NJ 07950-2546

For more information call : 1-844-890-8949
+1-973-455-3000

**In case of emergency call : Medical: 1-800-498-5701 or +1-303-389-1414
: Transportation (CHEMTREC): 1-800-424-9300 or
+1-703-527-3887
:
: (24 hours/day, 7 days/week)**

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid, clear

Color : colourless

Odor : characteristic mint-like acetone-like

Classification of the substance or mixture

Classification of the substance or mixture : Flammable liquids, Category 3
Acute toxicity, Category 4, Oral
Acute toxicity, Category 3, Dermal
Skin irritation, Category 2
Eye irritation, Category 2A

GHS Label elements, including precautionary statements

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Symbol(s)

:



Signal word

: Danger

Hazard statements

: Flammable liquid and vapour.
Harmful if swallowed.
Toxic in contact with skin.
Causes skin irritation.
Causes serious eye irritation.

Precautionary statements

: **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ eye protection/ face protection.**Response:**

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Remove/ Take off immediately all contaminated clothing.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal

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plant.

Carcinogenicity

ACGIH: Cyclohexanone 108-94-1
 A3: Confirmed animal carcinogen

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTSFormula : C₆H₁₀O

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Cyclohexanone	108-94-1	100.00 %

SECTION 4. FIRST AID MEASURES

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.

Notes to physician

Treatment : Treat symptomatically.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO₂)
Dry chemical
Foam
Cool closed containers exposed to fire with water spray.
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during firefighting : Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
In case of fire hazardous decomposition products may be produced such as:
Carbon dioxide (CO₂)
Carbon monoxide
- Special protective equipment for firefighters : In the event of fire and/or explosion do not breathe fumes.
Wear self-contained breathing apparatus and protective suit.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Wear personal protective equipment. Unprotected persons must be kept away.
Ensure adequate ventilation.
Remove all sources of ignition.
Pay attention to flashback.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Avoid contact with skin, eyes and clothing.
Do not breathe vapours or spray mist.
Do not swallow.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.

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Prevent product from entering drains.
 Discharge into the environment must be avoided.
 Do not flush into surface water or sanitary sewer system.
 Do not allow run-off from fire fighting to enter drains or water courses.

Methods for cleaning up : Ventilate the area.
 No sparking tools should be used.
 Use explosion-proof equipment.
 Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE
Handling

Handling : Handle with care.
 Wear personal protective equipment.
 Avoid contact with skin, eyes and clothing.
 Do not breathe vapours or spray mist.
 Do not swallow.
 Use only in well-ventilated areas.
 Keep away from fire, sparks and heated surfaces.
 Take precautionary measures against static discharges.
 Ensure all equipment is electrically grounded before beginning transfer operations.
 Do not smoke.
 Keep container tightly closed.
 Re-open used containers with caution.

Advice on protection against fire and explosion : Vapours may form explosive mixtures with air.
 Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
 Vapours are heavier than air and may spread along floors.
 The heavy vapours can overcome a considerable distance up to the source of ignition.
 Container hazardous when empty.
 Keep product and empty container away from heat and sources of ignition.
 Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
 Take measures to prevent the build up of electrostatic charge.
 To avoid ignition of vapours by static electricity discharge, all

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metal parts of the equipment must be grounded.
 Electrical equipment should be protected to the appropriate standard.
 When transferring from one container to another apply earthing measures and use conductive hose material.
 No sparking tools should be used.
 No smoking.

Storage

Requirements for storage areas and containers : Storage rooms must be properly ventilated.
 Keep containers tightly closed in a dry, cool and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Keep away from heat and sources of ignition.
 Keep away from direct sunlight.
 Store in area designed for storage of flammable liquids. Protect from physical damage.
 Store away from incompatible substances.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
 Avoid contact with skin, eyes and clothing.
 Do not breathe vapours or spray mist.
 Do not swallow.

Engineering measures : Use with local exhaust ventilation.
 Prevent vapour buildup by providing adequate ventilation during and after use.

Eye protection : Do not wear contact lenses.
 Wear as appropriate:
 Safety glasses with side-shields
 If splashes are likely to occur, wear:
 Goggles or face shield, giving complete protection to eyes

Hand protection : Solvent-resistant gloves
 Gloves must be inspected prior to use.
 Replace when worn.

Skin and body protection : Wear as appropriate:

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Solvent-resistant apron and boots
 Flame retardant antistatic protective clothing.
 If splashes are likely to occur, wear:
 Protective suit

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
 For rescue and maintenance work in storage tanks use self-contained breathing apparatus.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
 When using, do not eat, drink or smoke.
 Wash hands before breaks and immediately after handling the product.
 Keep working clothes separately.
 Avoid contact with skin, eyes and clothing.
 Do not breathe vapours or spray mist.
 Do not swallow.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Cyclohexanone	108-94-1	STEL : Short term exposure limit	(50 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Cyclohexanone	108-94-1	TWA : Time weighted average	(20 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Cyclohexanone	108-94-1	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2008	ACGIH:US. ACGIH Threshold Limit Values
Cyclohexanone	108-94-1	REL : Recommended exposure limit (REL):	100 mg/m3 (25 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards

SAFETY DATA SHEET



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Cyclohexanone	108-94-1	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Cyclohexanone	108-94-1	PEL : Permissible exposure limit	200 mg/m3 (50 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Cyclohexanone	108-94-1	TWA : Time weighted average	100 mg/m3 (25 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Cyclohexanone	108-94-1	SKIN_FINAL : Skin designation (Final Rule Limit applies):	Can be absorbed through the skin.	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid, clear
Color	: colourless
Odor	: characteristic mint-like acetone-like
pH	: Note: Not applicable
Melting point/range	: -45 °C
Boiling point/boiling range	: 155.6 °C
Flash point	: 111 °F (44 °C) Method: closed cup

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Evaporation rate : ca. 0.30
Method: Compared to Butyl acetate.

Lower explosion limit : 1.10 %(V)

Upper explosion limit : 9.40 %(V)

Vapor pressure : 5.27 hPa
at 20 °C(68 °F)

Vapor density : 3.4 Note: (Air = 1.0)

Density : 0.95 g/cm³ at 20 °C

Water solubility : ca. 150 g/l

Ignition temperature : 420 °C

Molecular weight : 98.16 g/mol

SECTION 10. STABILITY AND REACTIVITY

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Conditions to avoid : Heat, flames and sparks.
Keep away from direct sunlight.

Incompatible materials to : Acids

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avoid

Bases
Oxidizing agents
Nitric acid
May attack many plastics, rubbers and coatings.

Hazardous decomposition products

: Fire may cause evolution of:
Carbon monoxide
Carbon dioxide (CO₂)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: 1,535 mg/kg
Species: Rat

Acute inhalation toxicity : LC50: 32,080 mg/m³ 8000 ppm
Exposure time: 4 h
Species: Rat

Acute dermal toxicity : LD50: 948 mg/kg
Species: Rabbit
: LD50: > 794 - < 3,160 mg/kg
Species: Rabbit, male and female

Skin irritation : Species: Rabbit
Result: irritating
: Species: Rabbit
Result: irritating
Method: OECD Test Guideline 404

Eye irritation : Species: Rabbit
Result: irritating

Further information : Note: Confirmed animal carcinogen with unknown relevance to humans.

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : flow-through test
 LC50: 527 mg/l
 Exposure time: 96 h
 Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other : EC50: 820 mg/l
 aquatic invertebrates : Exposure time: 48 h
 Species: Daphnia (water flea)

Elimination information (persistence and degradability)

Biodegradability : Result: Readily biodegradable
 Value: > 60 %

Further information on ecology

Additional ecological : The product is readily degradable in the environment.
 information : Do not flush into surface water or sanitary sewer system.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1915
 Proper shipping name : CYCLOHEXANONE
 Class : 3
 Packing group : III
 Hazard Labels : 3

IATA UN/ID No. : UN 1915
 Description of the goods : CYCLOHEXANONE

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Class	:	3
Packaging group	:	III
Hazard Labels	:	3
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355
Packing instruction (passenger aircraft)	:	Y344

IMDG	UN/ID No.	:	UN 1915
	Description of the goods	:	CYCLOHEXANONE
	Class	:	3
	Packaging group	:	III
	Hazard Labels	:	3
	EmS Number	:	F-E, S-D
	Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Toxic Chemical Control Law (TCCL) List : On the inventory, or in compliance with the inventory

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances : On the inventory, or in compliance with the inventory

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New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 5000 lbs
: Cyclohexanone 108-94-1

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : 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.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

CERCLA Reportable Quantity : 5000 lbs

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.

Cumene 98-82-8
Ethylbenzene 100-41-4
Benzene 71-43-2

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: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Benzene 71-43-2

Massachusetts RTK : Cyclohexanone 108-94-1

New Jersey RTK : Cyclohexanone 108-94-1

Pennsylvania RTK : Cyclohexanone 108-94-1

WHMIS Classification : B3: Combustible Liquid
D1B: Toxic Material Causing Immediate and Serious Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2*	1
Flammability	: 2	2
Physical Hazard	: 0	
Instability	:	0

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of

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the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Prepared by AdvanSix Product Stewardship Group