

**** MATERIAL SAFETY DATA SHEET ****

2-chloro-1,4-Naphthoquinone

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

MSDS Name: 2-chloro-1,4-Naphthoquinone,

Synonyms:

2-chloro-1,4-Naphthalenedione

Company Identification (Europe): Acros Organics BVBA

Janssen Pharmaceuticaaan 3a

2440 Geel, Belgium

Company Identification (USA): Acros Organics

One Reagent Lane

Fairlawn, NJ 07410

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

For information in Europe, call: 0032(0) 14575211

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

For emergencies in Europe, call: 0032(0) 14575299

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

CAS#	Chemical Name	%	EINECS#	Haz Symbols	Risk Phrases
1010-60-2	2-chloro-1,4-Naphthoquinone	99%	213-776-2		

Hazard Symbols: Xn

Risk Phrases: 22 36/37/38

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

EMERGENCY OVERVIEW

Toxic if swallowed. Very toxic by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Very toxic to aquatic organisms.

Potential Health Effects

Eye:

Causes eye irritation.

Ingestion:

Harmful if swallowed. May cause irritation of the digestive tract.

Inhalation:

Causes respiratory tract irritation. May be harmful if inhaled.

Chronic:

Not available.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

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

Skin:

Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Get medical aid immediately. If conscious drink water, then induce vomiting. If unconscious, immediately take victim to a physician and do NOT attempt to induce vomiting. Wash mouth out with water.

Inhalation:

Get medical aid immediately. Remove from exposure and move 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.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

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

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

Storage:

Store in a cool, dry place. Store in a tightly closed container.

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

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

Eyes:

Wear chemical goggles.

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 29 CFR 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:	Powder
Color:	yellow
Odor:	irritating odor
pH:	Not available.
Vapor Pressure:	Not available.
Viscosity:	Not available.
Boiling Point:	308 °C at 760 mmHg
Freezing/Melting Point:	119-122 °C
Autoignition Temperature:	Not available.
Flash Point:	129.3 °C (285.80 deg F)
Explosion Limits, lower:	Not available.
Explosion Limits, upper:	Not available.
Decomposition Temperature:	
Solubility in water:	Insoluble.
Specific Gravity/Density:	

Molecular Formula: C10H5ClO2
Molecular Weight: 192.60

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Strong oxidizing agents, strong reducing agents.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:

CAS# 1010-60-2: QL7175000

LD50/LC50:

CAS# 1010-60-2: Draize test, rabbit, eye: 20 mg/24H Moderate; Oral,
rat: LD50 = 1960 mg/kg. Carcinogenicity:

2-chloro-1,4-Naphthoquinone -

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

See actual entry in RTECS for complete information.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:

logPOW: 1,75

Other

Avoid entering into waters or underground water. Do not empty into
drains.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

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

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

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

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

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

R 36/37/38 Irritating to eyes, respiratory system
and skin.

Safety Phrases:

S 24 Avoid contact with skin.

S 26 In case of contact with eyes, rinse immediately
with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with
plenty of water.

S 36/37/39 Wear suitable protective clothing, gloves
and eye/face protection.

S 38 In case of insufficient ventilation, wear
suitable respiratory equipment.

S 45 In case of accident or if you feel unwell, seek
medical advice immediately (show the label where
possible).

S 61 Avoid release to the environment. Refer to
special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 1010-60-2: 2

United Kingdom Occupational Exposure Limits

Canada

CAS# 1010-60-2 is not listed on Canada's DSL List.

CAS# 1010-60-2 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 1010-60-2: not available

US FEDERAL

TSCA

CAS# 1010-60-2 is not listed on the TSCA inventory.

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 10/14/2000 Revision #2 Date: 2/06/2008

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