

3-CHLOROPEROXY BENZOIC ACID

GHS Safety Data Sheet

Version No:2.0

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

3-CHLOROPEROXYBENZOIC ACID, 58-86%, WITH $\geq 14\%$ INERT

OTHER NAMES

C7-H5-Cl-O3, "solid organic peroxide", "3-chlorobenzenecarboperoxoic acid",
"m-chlorobenzoyl hydroperoxide", "meta-chloroperbenzoic acid", "3-chloroperbenzoic acid",
"meta chloroperoxybenzoic acid"

PROPER SHIPPING NAME

ORGANIC PEROXIDE TYPE B, SOLID

PRODUCT USE

Crosslinking of polymers.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

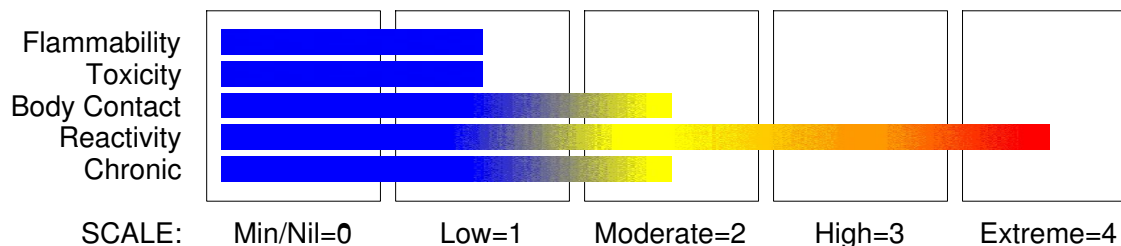
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HAZARD RATINGS



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Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Carcinogen Category 2
Eye Irritation Category 2A
Organic Peroxide Type B
Oxidizing Solid Category 3
Respiratory Irritation Category 3
Skin Corrosion/Irritation Category 3



EMERGENCY OVERVIEW

HAZARD

DANGER
Determined by using GHS criteria:
H335 H275 H241 H316 H319 H351
May cause respiratory irritation
May intensify fire; oxidizer
Heating may cause a fire or explosion
Causes mild skin irritation
Causes serious eye irritation
Suspected of causing cancer

PRECAUTIONARY STATEMENTS

Prevention

Keep wetted with liquid advised by manufacturer or MSDS.
Wear face protection.
Wear protective gloves and eye/face protection.
Wash hands thoroughly after handling.
Obtain special instructions before use.
Ground/bond container and receiving equipment.
Keep away from heat/sparks/open flame - No smoking.
Use personal protective equipment as required.
Do not subject to grinding/shock/friction.
Do not handle until all safety precautions have been read and understood.

Response

In case of fire, evacuate area.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs, seek medical advice/attention.
Wear eye/face protection.
DO NOT fight fire when fire reaches explosives.

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Section 2 - HAZARDS IDENTIFICATION

In case of fire: Evacuate area and fight fire remotely due to risk of explosion.

If exposed or concerned: Get medical attention advice.

Explosion risk in case of fire.

If eye irritation persists, get medical advice/attention.

Storage

Store in a cool place at temperatures not exceeding those specified by the manufacturer or MSDS

Store in accordance with relevant regulation.

Store locked up.

Protect from sunlight.

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
3- chloroperoxybenzoic acid		58-86
inert solid		>14
and may contain		
m- chlorobenzoic acid	535-80-8	<10

Section 4 - FIRST AID MEASURES

SWALLOWED

For advice, contact a Poisons Information Centre or a doctor.

· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.

· For advice, contact a Poisons Information Centre or a doctor.

Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

· Induce vomiting with fingers down the back of the of the throat, ONLY IF CONSCIOUS.

· Lean patient forward or place on left side (head-down position if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

· In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

· If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.

· If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.

EYE

If this product comes in contact with the eyes:

· Immediately hold the eyelids apart and flush the eye with 2% sodium carbonate solution or 5% sodium ascorbate solution then wash continuously for at least 15 minutes with fresh running water.

· Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

· Transport to hospital (or doctor) without further delay.

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Section 4 - FIRST AID MEASURES

- Removal of contact lenses should only be undertaken by trained personnel.

SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

NOTES TO PHYSICIAN

Treat symptomatically.

Toxic myocarditis may follow ingestion of oxidizing agents such as peroxides.

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary oedema .
- Monitor and treat, where necessary, for shock.
- Anticipate seizures .
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- DO NOT attempt neutralisation as exothermic reaction may occur.
- Skin burns should be covered with dry, sterile bandages, following decontamination.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994.

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Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Water spray or fog - Flooding quantities only.
- Foam.
- BCF (where regulations permit).
- Dry chemical Powder.
- Carbon Dioxide.
- WARNING: Deliver water spray or fog from a safe distance only.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water courses.
- Consider evacuation (or protect in place).
- Fight fire from a safe distance, with adequate cover.
- Extinguishers should be used only by trained personnel.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- If fire gets out of control withdraw personnel and warn against entry.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

Combustible solid.

Severe explosion hazard.

Material contains oxidising agent/organic peroxide. Oxygen provided makes fire fierce and self sustaining. Smothering action may not be effective for established fire. Intense heat may cause spontaneous decomposition (detonation). Due to possibility of reignition, extinguished residues must be thoroughly cooled before approaching.

Heating may cause expansion or decomposition leading to violent rupture of containers.

Other combustion products include: hydrogen chloride and carbon monoxide (CO).

FIRE INCOMPATIBILITY

- Presence of incompatible materials.
- Unstable under normal storage, requires special storage conditions.
- Prolonged exposure to heat above control temperature.
- Presence of shock and/or friction.
- Hazardous decomposition will occur.
- Amines and polyester accelerators (cobalt salts, for example) if mixed with organic peroxides / organic peroxide mixtures will cause rapid / spontaneous decomposition with fire / explosion hazard.
- Avoid any contamination.
- Avoid finely divided combustible materials
- Avoid all external heat.
- Avoid mixing or reaction with acids, alkalies, reducing agents, metal powders, metal oxides, transition metals and their compounds.
- Alkalies decompose peroxides / peroxide mixtures and may generate large volumes of carbon dioxide and pressurize containers.

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Section 5 - FIRE FIGHTING MEASURES

- Avoid contact with copper, brass and zinc (containers or stirrers, for example).

Personal Protective Equipment

Breathing apparatus.
Chemical splash suit.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- No smoking, naked lights, ignition sources.
- Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result.
- Avoid breathing dust or vapours and all contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with dry sand, earth, inert material or vermiculite.
- DO NOT use sawdust as fire may result.
- Scoop up solid residues and seal in labelled drums for disposal.
- Neutralise/decontaminate area.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- No smoking, flames or ignition sources.
- Increase ventilation.
- Contain spill with sand, earth or other clean, inert materials.
- NEVER use organic absorbents such as sawdust, paper, cloth; as fire may result.
- Avoid any contamination by organic matter.
- Use spark-free and explosion-proof equipment.
- Collect any recoverable product into labelled containers for possible recycling.
- DO NOT mix fresh with recovered material.
- Collect residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- Decontaminate equipment and launder all protective clothing before storage and re-use.
- If contamination of drains or waterways occurs advise emergency services.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

3-chloroperoxybenzoic acid, 58-86%, with $\geq 14\%$ inert 40 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

3-chloroperoxybenzoic acid, 58-86%, with $\geq 14\%$ inert 7.5 mg/m³

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Section 6 - ACCIDENTAL RELEASE MEASURES

other than mild, transient adverse effects without perceiving a clearly defined odour is:

3-chloroperoxybenzoic acid, 58-86%, with $\geq 14\%$ inert 1.25 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:

3-chloroperoxybenzoic acid, 58-86%, with $\geq 14\%$ inert 0.4 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	$\geq 0.1\%$	Toxic (T)	$\geq 3.0\%$
R50	$\geq 0.25\%$	Corrosive (C)	$\geq 5.0\%$
R51	$\geq 2.5\%$		
else	$\geq 10\%$		

where percentage is percentage of ingredient found in the mixture

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



X



X



X



X



X



X

+: May be stored together

O: May be stored together with specific precautions

X: Must not be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid personal contact and inhalation of dust, mist or vapours.
- Always wear protective equipment and wash off any spillage on clothing.
- Use in well ventilated areas, prevent accumulation of vapours.
- Keep material away from light, heat, ignition sources, flammables or combustibles.
- Keep dry and away from incompatible materials.
- Keep cool and below defined Control Temperature.
- Avoid friction, shock or containment.
- Use non-sparking equipment.
- Avoid physical damage to containers
- DO NOT repack or return unused portions to original container.
- Withdraw only sufficient material for immediate use.
- Contamination can cause VIOLENT DECOMPOSITION with intense heat and fire.
- Ensure proper rotation of stocks to limit decomposition and instability which may occur on long storage.
- When handling NEVER smoke, eat or drink.
- Always wash hands with soap and water after handling.
- Use only good occupational work practice.
- Observe manufacturer's storing and handling directions.

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Section 7 - HANDLING AND STORAGE

SUITABLE CONTAINER

Type B Solid Organic Peroxides UN 3102 are to be packed in this case to the requirements of OP1B of the ADG Code, with a maximum mass of 0.5 kg. Plastic inner receptacles in a fibre or plastics outer box or drum. Glass inner receptacles may be used. Steel or aluminium inner receptacles or outer drums are prohibited for Organic Peroxide Type B.

- Check that containers are clearly labelled.

STORAGE INCOMPATIBILITY

Segregate from strong acids, strong oxidisers, reducing agents, metals, metal oxides and amines. Avoid contamination with copper and its alloys, lead and zinc. Do not mix with catalysts, promoters, accelerators and combustible material.

STORAGE REQUIREMENTS

- Store in original containers in an isolated/detached store away from other materials.
 - Keep containers vented as supplied.
 - WARNING: Gradual decomposition during storage in sealed containers may lead to a large pressure build-up and subsequent explosion.
 - No smoking, naked lights, heat or ignition sources.
 - Store in a cool, dry, well ventilated area.
 - Store under cover and away from sunlight.
 - Store below safe storage (control) temperature.
 - Store away from flammable or combustible materials, debris and waste.
 - Store away from incompatible materials.
 - Store away from foodstuff containers
 - DO NOT stack on wooden floors or wooden pallets.
 - Protect containers against physical damage.
 - Check regularly for spills and leaks.
 - Observe manufacturer's storage and handling recommendations.
 - Keep locked up.
 - Restrictions may apply on quantities and to other materials permitted in the same location.
- Store at 20 degrees below the SADT.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- 3- chloroperoxybenzoic acid, 58- 86%, with CAS:937- 14- 4
>=14% inert:
- m- chlorobenzoic acid: CAS:535- 80- 8

MATERIAL DATA

No exposure limits set by NOHSC or ACGIH.

INGREDIENT DATA

M-CHLOROBENZOIC ACID:

These "dusts" have little adverse effect on the lungs and do not produce toxic effects or

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

organic disease. Although there is no dust which does not evoke some cellular response at sufficiently high concentrations, the cellular response caused by P.N.O.C.s has the following characteristics:

- the architecture of the air spaces remain intact,
- scar tissue (collagen) is not synthesised to any degree,
- tissue reaction is potentially reversible.

Extensive concentrations of P.N.O.C.s may:

- seriously reduce visibility,
- cause unpleasant deposits in the eyes, ears and nasal passages,
- contribute to skin or mucous membrane injury by chemical or mechanical action, per se, or by the rigorous skin cleansing procedures necessary for their removal. [ACGIH]

This limit does not apply:

- to brief exposures to higher concentrations
- nor does it apply to those substances that may cause physiological impairment at lower concentrations but for which a TLV has as yet to be determined.

This exposure standard applies to particles which

- are insoluble or poorly soluble* in water or, preferably, in aqueous lung fluid (if data is available) and
- have a low toxicity (i.e.. are not cytotoxic, genotoxic, or otherwise chemically reactive with lung tissue, and do not emit ionizing radiation, cause immune sensitization, or cause toxic effects other than by inflammation or by a mechanism of lung overload).

PERSONAL PROTECTION



EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

Polyethylene gloves.
Rubber gloves.
PVC gloves.
Safety footwear.

OTHER

- Overalls.
- PVC Apron.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Ensure there is ready access to a safety shower.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25- 0.5 m/s (50- 100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5- 1 m/s (100- 200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1- 2.5 m/s (200- 500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range

1: Room air currents minimal or favourable to capture

2: Contaminants of low toxicity or of nuisance value only.

Upper end of the range

1: Disturbing room air currents

2: Contaminants of high toxicity

continued...

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

3: Intermittent, low production.

4: Large hood or large air mass in motion

3: High production, heavy use

4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White powder. Faint odour. Insoluble in water.

May explode if subjected to heat, shock or friction. Never mix unless at least 14% of inert solid diluent is present.

PHYSICAL PROPERTIES

Solid.

Does not mix with water.

Molecular Weight: 172.567700

Melting Range (°C): 92- 94 decomposes

Solubility in water (g/L): Immiscible

pH (1% solution): Not applicable.

Volatile Component (%vol): Not applicable

Relative Vapour Density (air=1): Not applicable

Lower Explosive Limit (%): Not available.

Autoignition Temp (°C): Not available

State: Divided solid

Boiling Range (°C): Detonates @ 100

Specific Gravity (water=1): Not available

pH (as supplied): Not applicable

Vapour Pressure (kPa): Not applicable

Evaporation Rate: Not applicable

Flash Point (°C): detonates.

Upper Explosive Limit (%): Not available.

Decomposition Temp (°C): Not available

log Kow: 2.68

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Unstable under normal storage, requires special storage conditions.
- Prolonged exposure to heat above control temperature.
- Presence of shock and/or friction.
- Hazardous decomposition will occur.
- Amines and polyester accelerators (cobalt salts, for example) if mixed with organic peroxides / organic peroxide
- Avoid any contamination.
- Avoid finely divided combustible materials
- Avoid all external heat.
- Avoid mixing or reaction with acids, alkalies, reducing agents, metal powders, metal oxides, transition metals and

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Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

- Alkalies decompose peroxides / peroxide mixtures and may generate large volumes of carbon dioxide and pressure.
 - Avoid contact with copper, brass and zinc (containers or stirrers, for example).
-

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).

Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

Considered an unlikely route of entry in commercial/industrial environments.

Ingestion of organic peroxides may produce nausea, vomiting, abdominal pain, intoxication, cyanosis and severe central nervous system depression. Toxic myocarditis may also occur.

EYE

Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

Eye contact with organic peroxides may produce superficial opacity, redness, swelling of the membranes, and burns on prolonged contact.

SKIN

Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

All organic peroxides are irritating to the skin and if allowed to remain on the skin, may produce inflammation; some are allergenic.

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Section 11 - TOXICOLOGICAL INFORMATION

INHALED

Limited evidence exists, or practical experience predicts, that the material produces irritation of the respiratory system in a significant number of individuals following inhalation.

Although inhalation is not thought to produce harmful effects (as classified under EC Directives), the material may still produce health damage, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally confined to doses producing mortality rather than those producing morbidity (disease, ill-health).

Inhalation of organic peroxide dusts or mists may produce irritation of the entire respiratory tract and induce asthma-like effects. Generalised over-exposure may produce tearing, salivation, lethargy, decreased respiration rate, difficulties in breathing, headache, weakness, tremor, even pulmonary oedema with intoxication similar to that produced by alcohol.

CHRONIC HEALTH EFFECTS

On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

Primary route of exposure is usually by skin contact / eye contact.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

Chronic exposure to certain peroxides produces allergic dermatitis (with redness and scaling of the skin) and asthmatic wheezing.

TOXICITY AND IRRITATION

TOXICITY

An equivocal tumorigenic agent by RTECS criteria.
Limited evidence of a carcinogenic effect.

M-CHLOROBENZOIC ACID:

TOXICITY

Intraperitoneal (rat) LD50: 750 mg/kg

IRRITATION

Skin (mouse) TDLo: 21000 mg/kg/52W- I Nil
Reported

IRRITATION

Nil Reported

Section 12 - ECOLOGICAL INFORMATION

No data for 3-chloroperoxybenzoic acid, 58-86%, with $\geq 14\%$ inert.
Refer to data for ingredients, which follows:

M-CHLOROBENZOIC ACID:

log Pow (Verschueren 1983): 2.68

log Kow: 2.68

Anaerobic effects: fast degrad.

Degradation Biological: by soil microflora 32 days

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Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible. Special hazard may exist - specialist advice may be required.
- Consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury or incinerate residue at an approved site.
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
- Puncture containers to prevent re-use and bury at an authorised landfill.

WASTE DISPOSAL PROCEDURES

- Wear protective clothing, nitrile rubber gloves and eye protection to control personal contact from m- chloroperbenzoic acid. Body shield may also be required. Work in a well ventilated area, and add portions of m- chloroperbenzoic acid to a large volume of 50% aqueous sodium metabisulfite solution. Use starch iodide paper to test for complete reduction of peracid. Neutralise the contents and empty into the drain [Armour 1996].

SPILLAGE DISPOSAL

- Wear nitrile rubber gloves, protective clothing and eye protection to control personal contact. Cover and contain the m- chlorobenzoic spill with a 1:1:1 mixture by weight of sodium carbonate or calcium carbonate, calcium bentonite and sand. Collect the absorbed mixture and place in a well ventilated area. Add the mixture to 50% sodium metabisulfite solution. Stir for one hour. Stir the mixture for one hour. Empty the solution into the drain. Treat the solid residue as normal refuse [Armour 1996].

Section 14 - TRANSPORTATION INFORMATION



Labels Required: ORGANIC PEROXIDE,EXPLOSIVE
HAZCHEM: 2WE

UNDG:

Dangerous Goods Class:	5.2	Subrisk:	1.1
UN Number:	3102	Packing Group:	II
Shipping Name:ORGANIC PEROXIDE TYPE B, SOLID			

continued...

3-CHLOROPEROXY BENZOIC ACID

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Section 15 - REGULATORY INFORMATION

REGULATIONS

3-chloroperoxybenzoic acid, 58-86%, with $\geq 14\%$ inert (CAS: 937-14-4) is found on the following regulatory lists;
International Air Transport Association (IATA) Dangerous Goods Regulations

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
m- chlorobenzoic acid	535- 80- 8	Xn; R22 R43

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

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