N-CHLOROSUCCINIMIDE

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Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name:	N-Chlorosuccinimide
CAS Number:	128-09-6
EC Number:	204-878-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Application of the substance / the mixture	No further relevant information available. Chlorination in carbonyl and carbonyl compounds, sulphides and sulfoxides, Chlorination of aromatic compounds, Research with vinylic and acetylenic compounds

1.3 Details of the supplier of the safety data sheet

Company name:	East Harbour Group Ltd 20 Clough Road, Severalls Industrial Park Colchester, Essex, CO4 9QS United Kingdom
Telephone:	+44 (0) 333 242 0100
Email:	info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone:	0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Acute Tox. 4 H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

C; Corrosive
R34: Causes burns.

Xn; Harmful
R22: Harmful if swallowed.

Information concerning particular hazards for human and environmental: Not applicable.

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2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

Hazard pictograms


GHS05


GHS07

Signal word:	Danger
Hazard statement:	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
Precautionary statement:	
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353 IF ON SKIN (or hair)	Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE/DOCTOR.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

Section 3: Composition/information on ingredients

3.1 Chemical characterisation:	**Substances**
CAS No. Description	128-09-6 N-chlorosuccinimide
Identification number(s)	
EC number:	204-878-8
Additional information:	
Molecular Formula :	C4H4ClNO2
Molecular Weight :	133.53 g/mol
Purity:	99.0% min

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Section 4: First aid measures

4.1 Description of first aid measures
General information: Consult a physician. Show this safety data sheet to the doctor in attendance. ·
After inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
After skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
After eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. ·
After swallowing: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed.
No further relevant information available.
Information for doctor: Treat symptomatically and supportively.

4.3 Indication of any immediate medical attention and special treatment needed.
No further relevant information available.

Section 5: Fire-fighting measures

5.1 Extinguishing media
Suitable extinguishing agents: Use water spray, alcohol resistant foam, dry chemical, or carbon dioxide.

5.2 Special hazards arising from the substance or mixture.
Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Hydrogen chloride (HCl)

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
Protective equipment: Wear self-contained respirator.
Wear fully protective impervious suit.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions:
Do not allow product to reach sewage system or any water course. Do not allow to penetrate the ground/soil.

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6.3 Methods and material for containment and cleaning up:
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Section 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Information about fire - and explosion protection:
Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities.
Storage:
Requirements to be met by storerooms and receptacles:
Keep container tightly closed in a dry and well-ventilated place.
Information about storage in one common storage facility:
Store away from water/moisture.
Store away from strong bases.
Store away from oxidizing agents
Further information about storage conditions:
This product is moisture sensitive. Keep container tightly sealed. Store in cool, dry conditions in well-sealed containers. Protect from humidity and water.

7.3 Specific end use(s)
Chlorination in carbonyl and carbonyl compounds, sulphides and sulfoxides, Chlorination of aromatic compounds, Research with vinylic and acetylenic compounds

Section 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace: Not required.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

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Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protection of hands:
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Material of gloves
Material: Nitrile rubber Minimum layer thickness: 0.11 mm
Penetration time of glove material
Break through time: 480 min.

Eye protection: Tightly sealed goggles Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Body protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Solid
Form	Crystalline
Colour	White
Odour	Odour of Chlorine
pH-value (20 g/l)	Acidic
Change in condition	
Melting point/Melting range	150-151°C
Boiling point/Boiling range	216.5°C
Flash point	>110°C
Flammability (solid, gaseous):	Product is not flammable.
Danger of explosion	Product does not present an explosion hazard.
Vapour pressure at 25°C	0.00768hPa
Density at 20°C	1.65 g/cm3
Solubility in/ Miscibility with water at 25°C	14 g/l
Partition coefficient (n-octanol/water)	-1.190 log POW

9.2 Other information No further relevant information available.

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Section 10: Stability and Reactivity

10.1 Reactivity	
10.2 Chemical Stability	Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions	No dangerous reactions known .
10.4 Conditions to avoid	No further relevant information available.
10.5 Incompatible materials	Strong oxidizing agents, Strong acids, Strong bases, Amines, Ammonia, Iron and iron salts.
10.6 Hazardous decomposition products	Carbon monoxide and carbon dioxide Nitrogen oxides Hydrogen chloride (HCl)

Section 11: Toxicological Information

11.1 Toxicological effects:
Acute toxicity:
LD/LC50 values relevant for classification:

Oral	LD50	1000 mg/kg (rat)
		1212 mg/kg (rat)

Primary irritant effect:
On the skin: The substance is said to be a strong skin irritant (source-HSDB(Hawley, G.G.). Thus it is concluded that test substance N-CHLOROSUCCINIMIDE was considered to be skin corrosive.
On the eye: The substance may cause injury to eye (Source-HazMap).
Sensitisation: No sensitising effects known.
CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction) Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65

Section 12: Ecological Information

12.1 Toxicity
Aquatic toxicity: Quantitative data on the ecological effect of this product are not available.

12.2 Persistence and degradability
Biodegradation in water: Half-life: 15 days. The substance is estimated to be Not Readily biodegradable.

12.3 Bioaccumulative potential
Estimated BCF value =3.2. The substance is estimated to be Non Bioaccumulative

12.4 Mobility in soil
Estimated Soil Adsorption Coefficient value = 3. The substance is estimated to show high mobility in soil.
Additional ecological information: General notes: Not known to be hazardous to water.

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12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects
No further relevant information available.

Section 13: Disposal considerations

13.1 Waste treatment methods
Recommendation: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

Section 14: Transport Information

14.1 UN-Number
ADR, IMDG, IATA UN3261

14.2 UN proper shipping name
ADR 3261 CORROSIVE SOLID, ACIDIC , ORGANIC, N.O.S.(N-Chlorosuccinimide)
IMDG, IATA CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.(N-Chlorosuccinimide)

14.3 Transport hazard class(es)
ADR, IMDG, IATA
Class: 8 Corrosive substances.
Label: 8

14.4 Packing group
ADR, IMDG, IATA: II

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user
Warning: Corrosive substances.
Danger code (Kemler): 80
EMS Number: F-A,S-B
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

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Transport/Additional information:
ADR
Transport category 2
Tunnel restriction code E
UN "Model Regulation": CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.(N-Chlorosuccinimide), 8, II
This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS05 GHS07

Signal word	Danger
Hazard statements	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
Precautionary statements	
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353 IF ON SKIN (or hair):	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:
Other regulations, limitations, and prohibitive regulations
US TSCA: Not listed.
Japan MITI: Listed.
Australian Inventory of Chemical Substances (AICS): Listed.
New Zealand (NZioC): Listed
Philippine Inventory of Chemicals and Chemical Substances (PICCS): Listed
Substances of very high concern (SVHC) according to REACH, Article 57
The substance is not listed as SVHC.

15.2 Chemical safety assessment:
A Chemical Safety Assessment shall be carried out at the time of REACH Registration.

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Section 16: Other Information

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B