



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 10/10/2019 Version: 1.0

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

1.1. Product identifier

Product form : Mixture

Product name : N,N'-Dicyclohexylcarbodiimide, 1M solution in dichloromethane

 CAS-No.
 : 538-75-0

 Product code
 : 90026960

 Formula
 : C13H22N2

 Product group
 : Raw material

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

1.2.1. Relevant identified uses

Main use category : Laboratory use, Industrial use, Professional use

Industrial/Professional use spec : For professional use only Use of the substance/mixture : For analytical purposes

Scientific research and development

Not for human consumption or veterinary purposes.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Scafell Organics Molekula Ltd Lingfield Way Darlington - England

T +44 (0) 1949 823777 / +44 (0) 7590 545705

info@molekula.com / kbowen@molekula.com - www.molekula.com

1.4. Emergency telephone number

Emergency number : +44 (0) 7590 545705

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (dermal), Category 4 H312
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Skin sensitisation, Category 1 H317
Skin sensitisation, category 1B H317
Carcinogenicity, Category 2 H351
Specific target organ toxicity — Single exposure, Category 3, Narcosis H336
Hazardous to the aquatic environment — Chronic Hazard, Category 2 H411

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07





GHS05



GHS08

GHS09

Signal word (CLP) : Danger

Hazardous ingredients : Dichloromethane; N,N'-Dicyclohexylcarbodiimide (DCC)

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Hazard statements (CLP) : H312 - Harmful in contact with skin.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H336 - May cause drowsiness or dizziness. H351 - Suspected of causing cancer.

H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.

P264 - Wash hands, forearms and face thoroughly after handling.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

P308+P313 - IF exposed or concerned: Get medical advice/attention.

contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dichloromethane	(CAS-No.) 75-09-2 (EC-No.) 200-838-9 (EC Index-No.) 602-004-00-3	80 - 85	Carc. 2, H351
N,N'-Dicyclohexylcarbodiimide (DCC)	(CAS-No.) 538-75-0 (EC-No.) 208-704-1 (EC Index-No.) 615-019-00-5	15 - 20	Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Skin Sens. 1, H317

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If possible show this sheet, if not available show packaging or label. Never give anything by

mouth to an unconscious person. Do not leave affected person unattended.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable

for breathing. Give oxygen or artificial respiration if necessary. If breathing difficulties

persist : Get medical advice/attention.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash

immediately with plenty of water. Do not remove clothing if it sticks to the skin. If irritation

persists, consult a doctor.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do.

Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : May cause an allergic skin reaction. May cause sensitisation of susceptible persons.

Symptoms/effects after inhalation : Irritation to throat. Cough. Burning sensation. Headache. May cause drowsiness or

dizziness.

Symptoms/effects after skin contact : Harmful in contact with skin. Causes skin irritation. Itching. Redness, pain.

Symptoms/effects after eye contact : Causes serious eye damage. Blurred vision. redness, itching, tears. stinging.

Symptoms/effects after ingestion : May cause irritation to the digestive tract. Abdominal pain, nausea.

Chronic symptoms : Suspected of causing cancer.

4.3. Indication of any immediate medical attention and special treatment needed

Get immediate medical advice/attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2). Nitrogen oxides.

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5.3. Advice for firefighters

Precautionary measures fire : Keep container tightly closed and away from heat, sparks and flame. Keep away from

combustible materials.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Warn all persons of toxic hazard.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Isolate from fire, if possible, without unnecessary risk. Do not breathe gas, fumes, vapour

or spray. No flames, no sparks. Eliminate all sources of ignition.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent

access to unauthorized personnel. Do not touch or walk on the spilled product. Avoid

contact with skin, eyes and clothing.

Measures in case of dust release : Shelter from vapours by keeping upwind. Ventilate the area thoroughly, especially low lying

areas (basements, workpits etc).

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Use self-contained breathing apparatus and

chemically protective clothing.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain the spilled material by bunding.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

Try to stop release if without risk.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid formation of vapours. Provide local exhaust or general room ventilation.

Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when

leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ensure adequate ventilation, especially in confined areas.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat

sources, Direct sunlight. Keep container closed when not in use. Moisture sensitive. Store contents under inert gas.

Incompatible products : Strong oxidizing agents.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. Moisture. Water, humidity.

Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

Storage area : Store below 20 °C. Store in dry protected location to prevent any moisture contact.

7.3. Specific end use(s)

For analytical purposes. Scientific research and development. Not for human consumption or veterinary purposes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dichloromethane (75-09-2)		
EU	IOELV TWA (mg/m³)	≈ 350 mg/m³ UK
EU	IOELV STEL (mg/m³)	≈ 1060 mg/m³ UK
United Kingdom	Local name	Dichloromethane
United Kingdom	WEL TWA (mg/m³)	353 mg/m³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m³)	706 mg/m³

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Dichloromethane (75-09-2)		
United Kingdom	WEL STEL (ppm)	200 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE

8.2. Exposure controls

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety procedures. Floors should be impervious, resistant to liquids and easy to clean.

Personal protective equipment:

Avoid all unnecessary exposure.

Materials for protective clothing:

Wear suitable protective clothing, gloves and eye/face protection

Hand protection:

The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374

Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.11		EN 374

Eye protection:

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Use eye protection according to EN 166, designed to protect against liquid splashes.

Туре	Use	Characteristics	Standard
Safety goggles	Droplet, vapours	With side shields	EN 166

Skin and body protection:

Emergency safety showers should be available in the immediate vicinity of any potential exposure. Keep suitable chemically resistant protective clothing readily available for emergency use

Туре	Standard
Total impervious protective suits, gloves, and boots must be worn to prevent any contact with the product	EN 14605

Respiratory protection:

Keep self contained breathing apparatus readily available for emergency use. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

Device	Filter type	Condition	Standard
Respiratory protective device with a particle filter	ABEK	Protection for Liquid particles, Vapour protection	EN 14387

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: LiquidMolecular mass: 206.33 g/molColour: light yellow.Odour: Sweet.

Odour threshold : No data available pH : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : No data available Freezing point : No data available Boiling point : No data available

Flash point : 87 °C

Auto-ignition temperature : No data available
Decomposition temperature : No data available

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Flammability (solid, gas) : Non flammable.

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : 1.24

Solubility : No data available
Log Pow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Moisture. Water, humidity.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. Thermal decomposition generates: Carbon oxides (CO, CO2). Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Dermal: Harmful in contact with skin.

Acute toxicity (inhalation) : Not classified

Dichloromethane (75-09-2)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	60.14 mg/l/4h

N,N'-Dicyclohexylcarbodiimide (DCC) (538-7	5-0)
LD50 oral rat	400 mg/kg
LD50 dermal rat	71 mg/kg
LC50 inhalation rat (mg/l)	159 mg/m³ 6 hr
Skin corrosion/irritation	: Causes skin irritation.
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Causes serious eye damage.
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: May cause an allergic skin reaction. May cause an allergic skin reaction.
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Suspected of causing cancer.
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: May cause drowsiness or dizziness.

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: Based on available data, the classification criteria are not met Additional information

STOT-repeated exposure

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and

symptoms

: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Dichloromethane (75-09-2)	
LC50 fish 1	193 mg/l 96h
LC50 fish 2	97 mg/l 48h
EC50 other aquatic organisms 1	2.59 g/l 40min
NOEC chronic fish 83-321 - 28days	
12.2. Persistence and degradability	

N,N'-Dicyclohexylcarbodiimide, 1M solution in dichloromethane (538-75-0)

Persistence and degradability No data available.

Dichloromethane (75-09-2)

Persistence and degradability Not readily biodegradable.

N,N'-Dicyclohexylcarbodiimide (DCC) (538-75-0)

Persistence and degradability No data available.

12.3. Bioaccumulative potential

N,N'-Dicyclohexylcarbodiimide, 1M solution in dichloromethane (538-75-0)

Bioaccumulative potential No data available.

Dichloromethane (75-09-2)

Log Pow	1.25 at 20 °C
Bioaccumulative potential	Potentially bioaccumulable.

N,N'-Dicyclohexylcarbodiimide (DCC) (538-75-0)

Log Pow 6.83

12.4. Mobility in soil

Dichloromethane (75-09-2)

Ecology - soil low mobility.

12.5. Results of PBT and vPvB assessment

N,N'-Dicyclohexylcarbodiimide, 1M solution in dichloromethane (538-75-0)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component

Dichloromethane (75-09-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
N,N'-Dicyclohexylcarbodiimide (DCC) (538-75-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information · Avoid release to the environment

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN						
ADR	IMDG	IATA	ADN	RID		
14.1. UN number						
1593	1593	1593	1593	1593		
14.2. UN proper shipping name						
DICHLOROMETHANE	DICHLOROMETHANE	Dichloromethane	DICHLOROMETHANE	DICHLOROMETHANE		
Transport document description						
UN 1593 DICHLOROMETHANE (N,N'- Dicyclohexylcarbodiimide, 1M solution in dichloromethane), 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 1593 DICHLOROMETHANE (N,N'- Dicyclohexylcarbodiimide, 1M solution in dichloromethane), 6.1, III, MARINE POLLUTANT/ENVIRONME NTALLY HAZARDOUS	UN 1593 Dichloromethane (N,N'- Dicyclohexylcarbodiimide, 1M solution in dichloromethane), 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 1593 DICHLOROMETHANE (N,N'- Dicyclohexylcarbodiimide, 1M solution in dichloromethane), 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 1593 DICHLOROMETHANE (N,N'- Dicyclohexylcarbodiimide, 1M solution in dichloromethane), 6.1, III, ENVIRONMENTALLY HAZARDOUS		
14.3. Transport hazard class(es)						
6.1	6.1	6.1	6.1	6.1		
6	() () () () () () () () () ()	6	6	6		
14.4. Packing group						
III	III	III	III	III		
14.5. Environmental hazards						
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes		

No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : T1 Special provisions (ADR) : 516 Limited quantities (ADR) : 51 Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Special packing provisions (ADR) : B8 Mixed packing provisions (ADR) : MP19 Portable tank and bulk container instructions (ADR)

Portable tank and bulk container special provisions

(ADR)

Tank code (ADR) : L4BH Tank special provisions (ADR) : TU15, TE19

Vehicle for tank carriage : AT : 2 Transport category (ADR) Special provisions for carriage - Packages (ADR) : V12

Special provisions for carriage - Loading,

unloading and handling (ADR)

: CV13, CV28

: TP2

Special provisions for carriage - Operation (ADR) : S9

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Hazard identification number (Kemler No.) : 60

Orange plates

60 1593

Tunnel restriction code (ADR) : E EAC code : 2Z

Transport by sea

Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
IBC special provisions (IMDG) : B8
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP2
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A
Stowage category (IMDG) : A

Properties and observations (IMDG) : Colourless, volatile liquid with heavy vapours. Boiling point: 40°C. When involved in a fire,

evolves extremely toxic fumes (phosgene). Toxic if swallowed, by skin contact or by

inhalation.

Air transport

PCA Excepted quantities (IATA) : E1 : Y642 PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) : 2L PCA packing instructions (IATA) : 655 PCA max net quantity (IATA) : 60L CAO packing instructions (IATA) : 663 CAO max net quantity (IATA) : 220L ERG code (IATA) : 6L

Inland waterway transport

Classification code (ADN) : T1
Special provisions (ADN) : 516, 802
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EP, TOX, A

Ventilation (ADN) : VE02 Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : T1
Special provisions (RID) : 516
Excepted quantities (RID) : E1

Packing instructions (RID) : P001, IBC03, LP01, R001

Special packing provisions (RID) : B8

Mixed packing provisions (RID) : MP19

Portable tank and bulk container instructions (RID) : T7

Portable tank and bulk container special provisions (RID) : TP2

(RID)

Tank codes for RID tanks (RID) : L4BH
Special provisions for RID tanks (RID) : TU15
Transport category (RID) : 2
Special provisions for carriage – Packages (RID) : W12

Special provisions for carriage - Loading, : CW13, CW28, CW31

unloading and handling (RID)

Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 60

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions Contains no substance on the REACH candidate list Contains no REACH Annex XIV substances Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16

December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:		
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Carc. 2	Carcinogenicity, Category 2	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
Skin Sens. 1	Skin sensitisation, Category 1	
H302	Harmful if swallowed.	
H311	Toxic in contact with skin.	
H312	Harmful in contact with skin.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H318	Causes serious eye damage.	
H336	May cause drowsiness or dizziness.	
H351	Suspected of causing cancer.	
H411	Toxic to aquatic life with long lasting effects.	

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.