Product	Acetone
Revision date	01 December 2020
Revision	4

CarbonGroup
Intelligent Solutions. Delivered

Safety Data Sheet (SDS)

according to Regulation (EC) No. 1907/2006

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

1.1 Product identifier

Product name	**Acetone**
Other means of identification	No information available.

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

Identified uses	Raw material for photochemicals raw material for cleaning agents and disinfectants raw material for printing inks and printing ink additives Solvent Industrial use.
Uses advised against	No uses advised against are identified.

1.3 Details of the supplier of the safety data sheet

Supplier	THE CARBON GROUP RINGASKIDDY CORK Ireland Tel: +353 21 4378988
Contact person	info@ecoonline.com

1.4 Emergency telephone number

Emergency telephone	Emergency Contact Number:Available 24 Hours +353 21 437 8988 (Mon - Fri 8am - 5pm)
National emergency telephone number	Outside those hours, contact National Poisons Information Centre, Beaumont Hospital. Members of Public: +353 (1) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week) Healthcare Professionals: +353 (1) 809 2566 (24 hour service)

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and chemical hazards	Flam. Liq 2- H225
Human health	Eye Irrit.2A - H319, STOT SE 3 - H336
Environment	Not classified

2.2 Label elements

Label in accordance with (EC) no. 1272/2008

Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements

Prevention
P210 Keep away from heat/ sparks/open flames/hot surfaces. — No smoking.
P233 Keep container tightly closed.
P271 Use only outdoors or in a well-ventilated area.

Response
P370 + P378 In case of fire: Use alcohol-resistant foam, dry powder, water spray, carbon dioxide (CO2) for extinction.
Storage
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

EUH statements EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

None known.

Section 3: Composition/identification of ingredients

3.1 Substance

Name	Product identifier	Regulation (EC) No 1272/2008	%
acetone	CAS-No.: 67-64-1 EC No.: 200-662-2 REACH Reg No.: 01-2119471330-49-0015	Eye Irrit.2A - H319, Flam. Liq 2- H225, STOT SE 3 - H336	90-100%

The full text for all hazard statements are displayed in section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

3.2 Mixtures

Not applicable.

Section 4: First aid measures

4.1 Description of first aid measures

General information Provide general first aid, rest, warmth and fresh air. As a general rule, in case of doubt or if symptoms persist, always call a doctor. Seek medical attention for all burns and eye injuries, regardless how minor they may seem. First aid personnel must be aware of own risk during rescue.

Inhalation If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention. Move injured person into fresh air and keep person calm under observation. If necessary, seek hospital and bring these instructions. Seek medical advice (show the label where possible).

Ingestion Immediately rinse mouth and drink plenty of water. DO NOT induce vomiting. If person becomes uncomfortable or if ingested in large amounts seek medical advice and bring these instructions. Give activated carbon, in order to reduce the resorption in the gastro-enteric tract.

Skin contact If this product contacts the skin, immediately flush the affected area with plenty of clean running water for at least fifteen (15) minutes. Remove contaminated clothing. Get medical attention promptly if symptoms occur after washing.

Eye contact Do not rub eye. Avoid contaminating unaffected eye. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Remove contact lenses if present and easy to do so. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

General information The severity of the symptoms described will vary dependant of the concentration and the length of exposure.
Inhalation May cause drowsiness or dizziness.
Ingestion Ingestion may cause nausea and irritation to the mouth, throat and digestive system
Skin contact May cause skin dryness and irritation. Prolonged contact may cause defatting of the skin.
Eye contact Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to the physician Treat Symptomatically.

Section 5: Fire-fighting measures

5.1 Extinguishing media

Extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this may spread the fire.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products	During fire, toxic gases (CO, CO2) are formed.
Unusual fire & explosion hazards	Vapours may ignite. Vapours are heavier than air and may spread near ground to sources of ignition.
Specific hazards	The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures. When fighting fires in enclosed spaces: caution, danger of suffocation!

5.3 Advice for firefighters

Special fire fighting procedures	If possible, fight fire from protected position. Ventilate closed spaces before entering them. Keep up-wind to avoid fumes. Avoid breathing fire vapours. Containers close to fire should be removed immediately or cooled with water if safe to do so.
Protective equipment for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. In case of inadequate ventilation, use respiratory protection. Eliminate all sources of ignition. Avoid inhalation of vapours and contact with skin and eyes. If necessary evacuate surrounding areas. Read and follow manufacturer's recommendations. Do not mix with other chemicals.
For emergency responders	Follow safe handling advice and personal protective equipment recommendations for normal use of product.

6.2 Environmental precautions

Environmental precautions	Do not discharge into drains, water courses or onto the ground. Prevent material from entering sewers, waterways, or low areas. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Spill clean up methods	Ventilate and evacuate the area. Eliminate all sources of ignition. Wear necessary protective equipment. Stop leak if possible without risk. Use non sparking tools or equipment for clean up. For a large spillage dam with sand to contain spill, then cover with with alcohol-resistant foam. Absorb spillage with non-combustible, absorbent material - sand. In case of a large scale of spill, dyke area with sand to stop the spill spreading. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container. Flush with plenty of water to clean spillage area. Explosion protection required.

6.4 Reference to other sections

Reference to other sections	See section 1 for emergency contact. For personal protection, see section 8. For waste disposal, see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Handling	Use proper personal protection when handling (refer to Section 8). Keep away from heat, sparks and open flame. Provide good ventilation. Avoid inhalation of vapours and contact

with skin and eyes. Avoid prolonged or repeated contact.
Do not wear contact lenses. Do not mix with other chemicals. Do not eat, drink or smoke when using the product. Use non sparking tools/explosion proof equipment and lighting system. Take precautionary measures against static electricity. Read and follow manufacturer's recommendations Avoid formation of dust and aerosols. Vapours are heavier than air and may spread along floors.

7.2 Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Avoid contact with oxidising agents. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep locked up and out of reach of children. Keep away from direct sunlight. Pressurised container: Must not be exposed to temperatures above 50°C

Storage class Flammable liquid storage.

7.3 Specific end use(s)

Specific end use(s) The identified uses are in section 1 of this Safety Data Sheet.

Usage description Use only according to directions.

Section 8: Exposure controls/Personal protection

8.1 Control parameters

Component	STD	TWA (8 Hrs)		STEL (15mins)		Notes
acetone	OEL	500 ppm	1210 mg/m^3			IOELV
acetone	WEL	500 ppm	1210 mg/m^3	1500 ppm	3620 mg/m^3	

Ingredient comments Ireland, Occupational Exposure Limits 2020.
Workplace Exposure Limits Guidance Note EH40/2005.
DNEL:
Inhalation, Acute/short-term exposure - local effects :2420 mg/m3
dermal, long-term exposure - systemic effects :186 mg/kg Body weight/day
Inhalation, long-term exposure - systemic effects: 1210 mg/m^3
dermal, long-term exposure - systemic effects :62 mg/kg Body weight/day
Inhalation, long-term exposure - systemic effects : 200 mg/m^3
Oral, long-term exposure - systemic effects: 62 mg/kg Body weight/day
PNEC:
Freshwater: 10.6 mg/l
Marine water: 1.06 mg/l
Intermittent release: 21 mg/l
Sewage treatment plant: 100 mg/l.
Fresh water sediment: 30.4 mg/kg
Marine sediment: 3.04 mg/kg
Soil: 29.5 mg/kg

8.2 Exposure Controls

Protective equipment

Engineering measures Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Use explosion-proof ventilation equipment.

Respiratory equipment Where risk assessment shows air-purifying respirators are appropriate a full face respirator conforming to EN143, and suitable respirator cartridges as a backup to engineering controls. Where aerosols are in use, use self contained breathing apparatus with a type AX filter or appropriate combined filter (e.g. AX-P3), in compliance with EN 371. ABEK (EN 14387).
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).

Hand protection	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374) is recommended. (EU Directive 89/686/EEC). Selection of the glove material depends on consideration of the penetration times, rates of diffusion and degradation, and concentration specific to the workplace. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Suggested material: Butyl rubber. Layer thickness: 0.5 mm. Break through time: > 240 minutes. Unsuitable materials: Natural rubber/natural latex, Polychloroprene, Fluorinated rubber, Nitrile rubber/nitrile latex, Polyvinylchloride.
Eye protection	Wear safety goggles or face shield to prevent any possibility of eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).
Other protection	Wear appropriate clothing to prevent any possibility of skin contact. Select appropriate protective clothing based on chemical resistance data and an assessment of local exposure potential. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist. The selected clothing must satisfy the European norm standard EN 943.
Hygiene measures	DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated.
Process conditions	Use only according to directions. Ensure that eye flushing systems and safety showers are located close by in the work place.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Characteristic.
Odour threshold - lower	No information available as testing has not been completed.
Odour threshold - upper	No information available as testing has not been completed.
pH-Value, Conc. Solution	Not applicable.
pH-Value, Diluted solution	Not applicable.
Melting point	-94.70 °C
Initial boiling point and boiling range	56.05 1013 hPa
Flash point	-17.00 °C
Evaporation rate	No information available as testing has not been completed.
Flammability state	Not applicable.
Flammability limit - lower(%)	2.50
Flammability limit - upper(%)	13.00
Vapour pressure	240.00 hPa 20.00 °C
Vapour density (air=1)	> 1
Relative density	0.79g/cm^3 @ 20.00 °C
Bulk density	Not applicable.
Solubility	Completely soluble in water.
Decomposition temperature	No information available as testing has not been completed.
Partition coefficient; n-	log Pow: -0.24; 20 °C

Octanol/Water	
Auto ignition temperature (°C)	465.00 °C
Viscosity	0.32 mPas; 20 °C
Explosive properties	Formation of explosive vapour is possible.
Oxidising properties	The product does not meet the criteria to be classified as oxidising.

9.2 Other information

Molecular weight	58.08g/mol
Volatile organic compound	No information available as testing has not been completed.
Other information	None.

Section 10: Stability and reactivity

10.1 Reactivity

Reactivity	Vapours may form explosive mixture with air.

10.2 Chemical stability

Stability	Stable under normal temperature conditions and recommended use.

10.3 Possibility of hazardous reactions

Hazardous reactions	For information on hazardous reaction see section 10.1.
Hazardous polymerisation	Unknown
Polymerisation description	Unknown.

10.4 Conditions to Avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Forms explosive mixtures with air, also in empty, uncleaned containers. Avoid direct sunlight or ultraviolet sources.

10.5 Incompatible materials

Materials to avoid	Avoid strong oxidising agents, bases, strong acids.

10.6 Hazardous decomposition products

Hazardous decomposition products	During fire, toxic gases (CO, CO2) are formed. Distils without decomposition at atmospheric pressure.

Section 11: Toxicological information

11.1 Information on toxicological effects

Toxicological information	No toxicological information for the overall finished product.
Acute toxicity (Oral LD50)	No information available as testing has not been completed.
Acute toxicity (Dermal LD50)	No information available as testing has not been completed.
Acute toxicity (Inhalation LD50)	No information available as testing has not been completed.
Serious eye damage/irritation	Causes serious eye irritation.
Skin corrosion/irritation	The product is not classified as a skin corrosion/irritation hazard.
Respiratory sensitisation	The product is not classified as a respiratory hazard.
Skin sensitisation	The product is not classified as a skin sensitisation hazard.
Germ cell mutagenicity	The product is not classified as a mutagen.

Carcinogenicity The product is not classified as a carcinogen hazard.

Specific target organ toxicity - Single exposure:
STOT - Single exposure The product is classified as a single exposure specific target organ toxin.
Specific target organ toxicity - Repeated exposure:
STOT - Repeated exposure The product is not classified as a repeat exposure specific target organ toxin.

Inhalation May cause drowsiness or dizziness.
Ingestion Ingestion may cause nausea and irritation to the mouth, throat and digestive system
Skin contact May cause skin dryness and irritation. Prolonged contact may cause defatting of the skin.
Eye contact Causes serious eye irritation.
Waste management When handling waste, consideration should be made to the safety precautions applying to handling of the product.

Routes of entry Eyes, skin, ingestion or inhalation.
Target organs Eyes, skin, digestive system, respiratory system.

Aspiration hazards: The product is not classified as an aspiration hazard.
Reproductive toxicity: The product is not classified as a reproductive hazard.

Name	LD50 oral	LD50 dermal	LD50 inhalation
acetone	>5000.00mg/kg Rat	>5000.00mg/kg Rabbit	>20.00mg/l (vapours) Rat 4 Hours

Section 12: Ecological information

12.1 Toxicity

Acute toxicity - Fish No information available as testing has not been completed.
Acute toxicity - Aquatic invertebrates No information available as testing has not been completed.
Acute toxicity - Aquatic plants No information available as testing has not been completed.
Acute toxicity - Microorganisms No information available as testing has not been completed.
Chronic toxicity - Fish No information available as testing has not been completed.
Chronic toxicity - Aquatic invertebrates No information available as testing has not been completed.
Chronic toxicity - Aquatic plants No information available as testing has not been completed.
Chronic toxicity - Microorganisms No information available as testing has not been completed.
Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Eco toxilogical information Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

12.2 Persistence and degradability

Degradability The product is readily biodegradable.
Biological oxygen demand No information available as testing has not been completed.
Chemical oxygen demand No information available as testing has not been completed.

12.3 Bioaccumulative potential

Bioaccumulative potential Bioconcentration factor (BCF): 3; calculated. No bioaccumulation is to be expected (log Pow <= 4). (literature value) .
Bioaccumulation factor No information available as testing has not been completed.
Partition coefficient; n-Octanol/Water log Pow: -0.24; 20 °C

12.4 Mobility in soil

Mobility Highly mobile in soils. Low potential for absorption . (literature value) .

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment The product does not contain any PBT or vPvB Substances.

12.6 Other adverse effects

Other adverse effects No information available.

Name	Acute toxicity (Fish)	Acute toxicity (Aquatic invertebrates)	Acute toxicity (Aquatic plants)
acetone	LC50 96 Hours >100.00mg/l Onchorhynchus mykiss (Rainbow Trout)		

Section 13: Disposal considerations

Waste management When handling waste, consideration should be made to the safety precautions applying to handling of the product.

13.1 Waste treatment methods

Disposal methods Dispose of waste and residues in accordance with local authority requirements.

Section 14: Transport information

14.1 UN number

UN no. (ADR) UN1090
UN no. (IMDG) UN1090
UN no. (IATA) UN1090

14.2 UN proper shipping name

ADR proper shipping name ACETONE
IMDG proper shipping name ACETONE
IATA proper shipping name ACETONE

14.3 Transport hazard class(es)

ADR class 3
IMDG class 3
IATA class 3

Transport labels

14.4 Packing group

ADR/RID/ADN packing group II
IMDG packing group II
IATA packing group II

14.5 Environmental hazards

ADR No
IMDG No
IATA No

14.6 Special precautions for user

EMS F-E, S-D
Emergency action code Not applicable.
Hazard no. (ADR) 33
Tunnel restriction code (D/E)

14.7 Transport in bulk according to annex II of MARPOL73/78 and the IBC code

Not applicable.

Section 15: Regulatory information

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

EU legislation	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 with amendments. The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 830/2015 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
Approved code of practice	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019) Workplace Exposure Limits Guidance Note EH40/2005.
Chemical safety assessment	No chemical safety assessment has been carried out.

Section 16: Other information

General information	This Safety Data Sheet is in accordance with Reach Regulation (EC) No 453/2010
Revision comments	This is a fourth issue. [1]Information updated. [2]Information updated. [3]Information updated. [4]Information updated. [5]Information updated. [7]Information updated. [8]Information updated. [9]Information updated. [10]Information updated. [11]Information updated. [12]Information updated. [15]Information updated.
Revision date	01 December 2020
Revision	4
Safety data sheet status	Approved.

Hazard statements in full

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

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