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

· 1.1 Product identifier

· Trade name: **Thinner 214**

· Article number: 0556
· CAS Number:
110-43-0
· EC number:
203-767-1
· Index number:
606-024-00-3
· 1.2 Relevant identified uses of the substance or mixture and uses advised against
· Sector of Use
SU3 Industrial uses: use of substances as such or in preparations in an industrial environment
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU22 Professional use: Public domain (administration, education, entertainment, services, craftsmen)
· Process category
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC7 Industrial spraying
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
PROC19 Manual activities involving hand contact
· Environmental release category
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC6a Use of intermediate
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
· Application of the substance / the mixture Thinner, Diluent

· 1.3 Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
Carboline
Carrer Numancia 185,
Entresuelo, 08034,
Barcelona, Espana.
+34 93 209 60 19

· Further information obtainable from: regulatoryeurope@carboline.com
· 1.4 Emergency telephone number:
This product does not need to be notified under Article 45.
CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)
HEALTH - Pittsburgh Poison Control 1-412-681-6669

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SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008

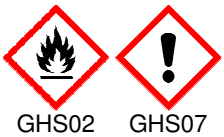
GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H332 Harmful if inhaled.

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



GHS02 GHS07

· Signal word Warning

· Hazard-determining components of labelling:
heptan-2-one
· Hazard statements
H226 Flammable liquid and vapour.
H302+H332 Harmful if swallowed or if inhaled.
· Precautionary statements
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 In case of inadequate ventilation wear respiratory protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
· Additional information:
Restricted to professional users.
· 2.3 Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Substances
· CAS No. Description
110-43-0 heptan-2-one
· Identification number(s)
· EC number: 203-767-1
· Index number: 606-024-00-3

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SECTION 4: First aid measures

· 4.1 Description of first aid measures
· General information:
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· After inhalation:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
· After skin contact:
Immediately rinse with water.
If skin irritation continues, consult a doctor.
· After eye contact:
Rinse opened eye for several minutes under running water. Then consult a doctor.
Contact lens removal.
· After swallowing:
Rinse mouth.
Do not induce vomiting; call for medical help immediately.
Call for a doctor immediately.
· 4.2 Most important symptoms and effects, both acute and delayed Headache
· 4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media
· Suitable extinguishing agents: CO2 or powder. Fight larger fire with alcohol-resistant foam.
· For safety reasons unsuitable extinguishing agents: Water with full jet
· 5.2 Special hazards arising from the substance or mixture Carbon monoxide (CO)
· 5.3 Advice for firefighters
· Protective equipment:
Mouth respiratory protective device.
Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
· 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
· 6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Collect leaking liquid in sealable waste containers.
· 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 Ensure good ventilation/exhaustion at the workplace.
· Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· 7.2 Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
· Information about storage in one common storage facility: Store away from oxidising agents.
· Further information about storage conditions: Keep container tightly sealed.

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· Storage class: 3
· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters
· Ingredients with limit values that require monitoring at the workplace:

110-43-0 heptan-2-one
WEL Short-term value: 475 mg/m³, 100 ppm
Long-term value: 237 mg/m³, 50 ppm
Sk
· DNELs

Dermal	Long-term exposure - systemic effects	54.27 mg/kg bw/day (workers / long-term exposure)
Inhalative	Acute - short-term exposure - systemic effects	1,516 mg/m3 (hamster)
	Long-term exposure - systemic effects	394.25 mg/m3 (workers / long-term exposure)

110-43-0 heptan-2-one

Dermal	Long-term exposure - systemic effects	54.27 mg/kg bw/day (worker)
Inhalative	Acute - short-term exposure - systemic effects	1,516 mg/m3 (worker)
	Long-term exposure - systemic effects	394.25 mg/m3 (worker)

· PNECs
PNEC 0.321 mg/kg (bd)
0.189 mg/kg (sediment marine water)
1.89 mg/kg (sediment freshwater)
PNEC 12.5 mg/l (STP)
0.0982 mg/l (aqua, freshwater)
0.982 mg/l (aqua, intermittent releases)
0.00982 mg/l (aqua, marine water)

110-43-0 heptan-2-one
PNEC 0.189 mg/kg (sediment marine water)
1.89 mg/kg (sediment freshwater)
0.321 mg/kg (soil)
PNEC 12.5 mg/l (STP)
0.098 mg/l (aqua, freshwater)
0.982 mg/l (aqua, intermittent releases)
0.01 mg/l (aqua, marine water)
· Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls
· Appropriate engineering controls Ensure adequate ventilation.
· Individual protection measures, such as personal protective equipment
· General protective and hygienic measures:
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
· Respiratory protection:
Short term filter device:
Filter type A.
If workers are exposed to concentrations above the exposure limit, they should use a suitable, certified respirator.
· Hand protection

Protective gloves

The glove material has to be impermeable and resistant to the product.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· Material of gloves
Suitable material for safety gloves (EN 374):
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· Eye/face protection

Tightly sealed goggles

· Body protection: Solvent resistant protective clothing
· Environmental exposure controls No additional data. See 6 and 13.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties
· General Information

· Physical state	Fluid
· Colour:	Clear
· Odour:	Pungent
· Odour threshold:	Not determined.
· Melting point/freezing point:	-36 °C
· Boiling point or initial boiling point and boiling range	152 °C (110-43-0 heptan-2-one)
· Flammability	Flammable.
· Lower and upper explosion limit	
· Lower:	1 Vol % (110-43-0 heptan-2-one)
· Upper:	5.5 Vol % (110-43-0 heptan-2-one)
· Flash point:	39 °C
· Auto-ignition temperature:	393 °C (110-43-0 heptan-2-one)
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water at 20 °C:	4.3 g/l Slightly soluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	3.466 hPa (110-43-0 heptan-2-one)
· Vapour pressure at 50 °C:	22 hPa
· Density and/or relative density	
· Density at 20 °C:	0.81 g/cm³
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information

· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· Solvent content:	
· Organic solvents:	100.0 %
· VOC (EC)	810.0 g/l 100.00 %
· Solids content:	0.0 %

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· Molecular weight	114.19 g/mol
· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Flammable liquid and vapour.
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.
· 10.2 Chemical stability
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· 10.3 Possibility of hazardous reactions
Reacts with oxidising agents.
Reacts with strong oxidizing agents.
· 10.4 Conditions to avoid High temperatures
· 10.5 Incompatible materials: Strong oxidising products.
· 10.6 Hazardous decomposition products: Carbon monoxide

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
· Acute toxicity Harmful if swallowed or if inhaled.
· LD/LC50 values relevant for classification:

110-43-0 heptan-2-one

Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4h	>16.7 mg/l (rat)

· 11.2 Information on other hazards
· Endocrine disrupting properties

Substance is not listed.

SECTION 12: Ecological information

· 12.1 Toxicity
· Aquatic toxicity:

110-43-0 heptan-2-one

ErC50/72h 98.2 mg/l (pseudokirchneriella subcapitata) (OECD 201)
LC50/96h 131 mg/l (pimphales promelas)

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· 12.2 Persistence and degradability No further relevant information available.
· Degree of elimination:

110-43-0 heptan-2-one
BOD/28d 69 % (/)
· 12.3 Bioaccumulative potential

110-43-0 heptan-2-one
LogPow 2.26 /30 °C (/)
· 12.4 Mobility in soil No further relevant information available.
· 12.5 Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
· 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
· 12.7 Other adverse effects
· Additional ecological information:
· General notes:
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods
· Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN number or ID number
· ADR/ADN, IMDG, IATA UN1110
· 14.2 UN proper shipping name
· ADR/ADN 1110 n-AMYL METHYL KETONE
· IMDG, IATA n-AMYL METHYL KETONE
· 14.3 Transport hazard class(es)

· ADR/ADN, IMDG, IATA

· Class 3 Flammable liquids.
· Label 3
· 14.4 Packing group
· ADR/ADN, IMDG, IATA III
· 14.5 Environmental hazards:
· Marine pollutant: No
· 14.6 Special precautions for user Warning: Flammable liquids.
· Hazard identification number (Kemler code): 30
· EMS Number: F-E,S-D
· Stowage Category A
· 14.7 Maritime transport in bulk according to IMO instruments Not applicable.

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· Transport/Additional information:

· ADR/ADN	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1110 N-AMYL METHYL KETONE, 3, III

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Poisons Act
· Regulated explosives precursors

Substance is not listed.
· Regulated poisons

Substance is not listed.
· Reportable explosives precursors

Substance is not listed.
· Reportable poisons

Substance is not listed.

· Directive 2012/18/EU
· Named dangerous substances - ANNEX I Substance is not listed.
· Seveso category P5c FLAMMABLE LIQUIDS
· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

· National regulations:

· Other regulations, limitations and prohibitive regulations
The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

*
SECTION 16: Other information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:
ADR: Accord relatif au transport international 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)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3

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Acute Tox. 4: Acute toxicity – Category 4

· * Data compared to the previous version altered.