IONOL 103

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 01/07/2014 Revision date: 01/07/2014 Supersedes: 12/01/2010 Version: 3.0

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

1.1. Product identifier

Product form : Substance

Chemical name : 2,6-di-tert-butyl-α-dimethylamino-p-cresol

CAS No : 88-27-7

Formula : C17H29NO

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

Use of the substance/mixture : Antioxidant for lubricants and greases.

1.3. Details of the supplier of the safety data sheet

Oxiris Chemicals S.A
Ctra.C-35 Km 59 - Pol. Ind. Nord-Est
Sant Celoni, 08470 - Spain
T +34 93 867 49 97
msds@oxirischemicals.com

1.4. Emergency telephone number

Emergency number : 24 h CHEMTREC: 1 (800) 424-9300 (United States/Canada) 703-527-3887 (outside United States)
This product is distributed by : PMC Specialties Group, 501, Murray Road, Cincinnati, Ohio 45217. Company registered as Chemtrec member.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral) H302
Eye Irrit. 2A H319
Skin Sens. 1B H317

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) : P261 - Avoid breathing dust
P280 - Wear eye protection, protective gloves
P302+P352 - If on skin: Wash with plenty of water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent

Chemical name : 2,6-di-tert-butyl-α-dimethylamino-p-cresol

CAS No : 88-27-7
EC no : 201-816-1

Name	Product identifier	%	GHS-US classification
2,6-di-tert-butyl-α-dimethylamino-p-cresol (Main constituent)	(CAS No) 88-27-7	99 - 100	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Skin Sens. 1B, H317

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/injuries after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/injuries after ingestion : Swallowing of this material presents some health hazard.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

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

5.2. Special hazards arising from the substance or mixture

Fire hazard : On burning: release of carbon monoxide - carbon dioxide.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid contact with skin and eyes. Avoid breathing dust.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

Other information : Remove ignition sources. Avoid the build-up of electrostatic charge.

6.4. Reference to other sections

See Heading 8. Exposure controls / Personal protection equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid breathing dust. Avoid dust production. Take precautionary measures against static discharge.

Hygiene measures : Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Take precautionary measures against static discharges.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : acids and bases, Sources of ignition., Heat sources, Direct sunlight, Strong oxidizing agents. Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Packaging materials : Paper bags with polyethylene liner. Fibre keg. Big-bag.

7.3. Specific end use(s)

Antioxidant for lubricants and greases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

Personal protective equipment : Avoid all unnecessary exposure. .

Hand protection : PVC gloves.

Eye protection : Chemical goggles or safety glasses.

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 : Solid

Appearance : Solid Crystalline.

Molecular mass : 263,4183 g/mol

Colour : White to slight yellowish.

Odour : Characteristic.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : 94 °C (101,3kPa)

Freezing point : No data available

Boiling point : 336,78 °C (101,3kPa)

Flash point : No applicable (solid)

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : 0,00226 Pa 25 ºC

Vapour density : No data available

Relative density : 1,023 20ºC (UE method A.3)

Solubility	:	Water: 10,7 mg/l 20ºC (pH 9.2) (OECD 105; UE method A.6)
Log Pow	:	4,24 (Estimated Data KOWWIN v1.68)
Log Kow	:	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

Minimum ignition energy	:	30 mJ
Other properties	:	MIT (Minimum Ignition Temperature), dust layer: 100 ºC. MIT (Minimum Ignition Temperature), dust cloud: 380 ºC. K max (Product Caracteristic Constant): 196 mbar/s.

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases. Oxidizing agent.

10.6. Hazardous decomposition products

Fumes. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

2,6-di-tert-butyl-α-dimethylamino-p-cresol (\f)88-27-7	
LD50 oral rat	461 mg/kg bodyweight OECD 401
LD50 dermal rabbit	> 4000 mg/kg bodyweight OECD 402
ATE US (oral)	461,00 mg/kg bodyweight

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitisation	:	May cause an allergic skin reaction.
Germ cell mutagenicity	:	Not classified Negative results on in vitro test on bacteria (equivalent to OECD 471 and 472) (extrapolation) Negative and positive results (with metabolic activation) on in vitro mammalian chromosome aberration test (equivalent to OECD 473) (extrapolation) Negative results on in vitro mammalian cells gene mutations assay (equivalent to OECD 476) (extrapolation) Negative results on in vivo chromosome aberration: micronucleus test (equivalent to OECD 474) (extrapolation)
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified The classification criteria are not meet.

2,6-di-tert-butyl-α-dimethylamino-p-cresol (88-27-7)	
NOAEL (oral, rat, 90 days)	30 mg/kg bodyweight/day (extrapolation) (Two generation test on reproduction toxicity)

Aspiration hazard : Not classified

Symptoms/injuries after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/injuries after ingestion : Swallowing of this material presents some health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

2,6-di-tert-butyl-α-dimethylamino-p-cresol (88-27-7)	
LC50 fishes	0,907 mg/l (96h)
Additional ecotoxicological information	LC50, Daphnia Magna: = 0,335 mg/l (48 Hours) EC50, algae: = 0,297 mg/l (96 Hours) IC50, Sewage treatment plant: > 100 mg/l (3 Hours)

12.2. Persistence and degradability

2,6-di-tert-butyl-α-dimethylamino-p-cresol (88-27-7)	
Persistence and degradability	May cause long-term adverse effects in the environment. Not readily biodegradable. (Estimated data; BIOWIN v4.10).

12.3. Bioaccumulative potential

2,6-di-tert-butyl-α-dimethylamino-p-cresol (88-27-7)	
Bioconcentration factor (BCF REACH)	No experimental data available. BCF= 173.5 L/Kg wet weight (estimated data; BCFBAF v3.01) Log Kow 4.24 (Estimated)
Log Pow	4,24 (Estimated Data KOWWIN v1.68)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Recover and reclaim or recycle, if practical. Reprocess or burn in an approved incinerator.

Waste disposal recommendations : Contaminated packaging material should be treated same as the residuals. 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 DOT

Not dangerous goods

(Reference the DOT Exemption 171.4)

Additional information

Other information : No supplementary information available.

ADR

Transport document description : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (E)

Packing group (ADR) : III

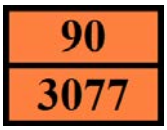
Class (ADR) : 9 - Miscellaneous dangerous substances and articles

Hazard identification number (Kemler No.) : 90

Classification code (ADR) : M7

Danger labels (ADR) : 9 - Miscellaneous dangerous substances and articles

Orange plates :



Tunnel restriction code (ADR) : E

LQ : 5kg

Excepted quantities (ADR) : E1

Transport by sea

UN-No. (IMDG) : 3077

Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Class (IMDG) : 9 - Miscellaneous dangerous substances and articles

Packing group (IMDG) : III - substances presenting low danger

MFAG-No : 171

Marine pollutant :

Air transport

UN-No.(IATA) : 3077

Proper Shipping Name (IATA) : Environmentally hazardous substance, solid, n.o.s.

Class (IATA) : 9 - Miscellaneous Dangerous Goods

Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

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

Acute Tox. 4 (Oral) H302
Eye Irrit. 2 H319
Skin Sens. 1B H317
Aquatic Acute 1 H400
Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

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

R43
Xn; R22
Xi; R36
N; R50/53

Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Revision date : 07/01/2014 0:00:00

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 : For further information, contact your local company or agent. The information in this document should be made available to all who may handle the product.

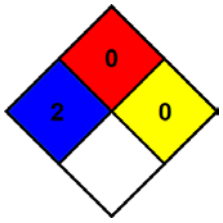
Full text of H-phrases: see section 16:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Sens. 1B	Sensitisation — Skin, category 1B
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012)

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