INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 1/9

Safety Data Sheet according to Canadian HPR (WHMIS 2015)

1. Identification

1.1. Product identifier

Code: CA519

Product name ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

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

Intended use Catalyst

Identified Uses Industrial Professional Consumer

Pertinent description of use:

Uses Advised Against

Industrial Professional Consumer

-

Do it yourself

1.3. Details of the supplier of the safety data sheet

Name INDUSTRIA CHIMICA ADRIATICA S.P.A.

Full address Via S. Pertini, 52

District and Country 62012 Civitanova Marche (MC)

ITALY

Tel. +39 0733 8080 Fax +39 0733 808140

e-mail address of the competent person

responsible for the Safety Data Sheet regulatoryaffairs@icaspa.com

Product distribution by: INDUSTRIA CHIMICA ADRIATICA S.p.A.

1.4. Emergency telephone number

For urgent inquiries refer to Anti-poison centre – Hospital of Florence (24/24 hours)

Telephone +39 055 794 7819

2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in Canada's Hazardous Products Regulations (HPR) (WHMIS 2015). The product thus requires a safety datasheet.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Classification and Hazard Statement

Flammable liquid, category 3
Acute toxicity, category 4

Specific target organ toxicity - single exposure, category 3

Skin sensitization, category 1

Flammable liquid and vapour.

Harmful if inhaled.

May cause respiratory irritation.

May cause an allergic skin reaction.

Hazard pictograms:





Signal words: Warning

Hazard statements:

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.H317 May cause an allergic skin reaction.

Precautionary statements:

Prevention:

ICA 8

INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 2/9

2. Hazards identification .../>>

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical / ventilating / lighting / equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P261 Avoid breathing dust / fume / gas / mist / vapours / spray.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves / eye protection / face protection.

Response:

P302+P352 IF ON SKIN: wash with plenty of water and soap.

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.

P312 Call a POISON CENTER / doctor / if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice / attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: use chemical powder to extinguish.

Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, international regulations.

2.2. Other hazards

Additional hazards

Environmental classification as for Reg. (EU) 1272/2008 (CLP):

The product is classified as hazardous for environment pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP).

Classification and Hazard Statement

Hazardous to the aquatic environment, chronic toxicity, category 3 Harmful to aquatic life with long lasting effects.

Hazard statements:

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P273 Avoid release to the environment.

Response:

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Storage:

age.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, international regulations.

Contains isocyanates. May produce an allergic reaction.

3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification x = Conc. % (w/w) Classification:

Hexamethylene-1,6-diisocyanate Homopolymer

CAS 3779-63-3 $30 \le x < 50$ Acute toxicity, category 4 H332, Specific target organ toxicity - single exposure,

category 3 H335, Skin sensitization, category 1 H317

Aliphatic polyisocyanate

CAS 666723-27-9 $30 \le x < 50$ Acute toxicity, category 4 H332, Specific target organ toxicity - single exposure,

category 3 H335, Skin sensitization, category 1 H317,

(ICA)

INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 3 / 9

3. Composition/information on ingredients />

Hazardous to the aquatic environment, chronic toxicity, category 3 H412

1-methoxy-2-propanol acetate

CAS 108-65-6 $30 \le x < 50$ Flammable liquid, category 3 H226

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4. First-aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

5. Fire-fighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 4 / 9

6. Accidental release measures />>

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

See paragraph 1.2. For further information consult the technical data sheet.

8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

ONT Ontario	R.R.O 1990, REGULATION 833
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EU OEL EU Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC;

Directive 2000/39/EC; Directive 91/322/EEC.

1-methoxy-2-propanol acetate									
Threshold Limit Value									
Type	Country	TWA/8h		STEL/15min					
		mg/m3	ppm	mg/m3	ppm				
OEL	EU	275	50	550	100	SKIN			
ONT	CAN	270	50						

Legend:

 $(C) = CEILING \hspace{0.2cm} ; \hspace{0.2cm} INHAL = Inhalable \hspace{0.2cm} Fraction \hspace{0.2cm} ; \hspace{0.2cm} RESP = Respirable \hspace{0.2cm} Fraction \hspace{0.2cm} ; \hspace{0.2cm} THORA = Thoracic \hspace{0.2cm} Fraction.$

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must comply with current regulations.

HAND PROTECTION

Protect hands with category III work gloves (OSHA 29 CFR 1910.138).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing. EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133, CSA Standard CAN/CSA-Z94.3-92).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a

(ICA)

INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 5 / 9

8. Exposure controls/personal protection />>

NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134, CSA Standard Z94.4-02). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134, CSA Standard Z94.4-02.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance liquid
Colour colourless
Odour characteristic
Odour threshold Not available
pH Not available
Melting point / freezing point Not available
Initial boiling point Not available
Boiling range Not available

Flash point $23 \le T \le 60$ °C $(73.4 \le T \le 140 \text{ °F})$

Evaporation Rate Not available Flammability of solids and gases Not available Lower inflammability limit Not available Upper inflammability limit Not available Lower explosive limit Not available Upper explosive limit Not available Vapour pressure Not available Vapour density Not applicable Relative density 1.11

Solubility insoluble in water
Partition coefficient: n-octanol/water Not available
Auto-ignition temperature Not available
Decomposition temperature Not available
Viscosity Not available
Explosive properties Not available
Oxidising properties Not available

9.2. Other information

Total solids (250°C / 482°F) 70,00 %

VOC: 333.00 g/litre

10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10,2, Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

10.5. Incompatible materials

Information not available

INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 6 / 9

10. Stability and reactivity/>>

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

Hexamethylene-1,6-diisocyanate Homopolymer

LD50 (Oral)

> 5000 mg/kg Rat

1-methoxy-2-propanol acetate

LD50 (Oral) LD50 (Dermal) LC50 (Inhalation)

> 5000 mg/kg Rat

> 5000 mg/kg Rabbit

> 10.6 mg/l/6h Rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause respiratory irritation

STOT - REPEATED EXPOSURE

INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 7 / 9

11. Toxicological information/>>

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

1-methoxy-2-propanol acetate

LC50 - for Fish

> 100 mg/l/96h Fish

12.2. Persistence and degradability

Information not available

12.3. Bioaccumulative potential

Information not available

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA: 1866

14.2. UN proper shipping name

ADR / RID: RESIN SOLUTION IMDG: RESIN SOLUTION IATA: RESIN SOLUTION

@EPY 9.5.1 - SDS 1004.7

(ICA)

INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 8 / 9

14. Transport information/>>

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3



14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO IMDG: NO IATA: NO

14.6. Special precautions for user

ADR / RID: HIN - Kemler: 30 Limited Quantities: 5 L Tunnel restriction code: (D/E) Special Provision: -

IMDG: EMS: F-E, S-E Limited Quantities: 5 L
IATA: Cargo: Maximum quantity: 220 L

Cargo: Maximum quantity: 220 L Packaging instructions: 366
Pass.: Maximum quantity: 60 L Packaging instructions: 355

Special Instructions: A3

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

Information not relevant

15. Regulatory information

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

Substances subject to the Rotterdam Convention:

None

Canadian Regulatory Information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR).

Safety Data Sheet according to WHMIS 2015.

Inventory Status of the contained substance/s.

All ingredients are listed in DSL.

16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road

INDUSTRIA CHIMICA ADRIATICA S.P.A.

CA519 - ANTI-YELLOWING CATALYST FOR WATER BASED PRODUCTS

Revision nr.1 Dated 7/11/2019 Printed on 7/11/2019 Page n. 9 / 9

16. Other information .../>>

- CAS NUMBER: Chemical Abstract Service Number CE50: Effective concentration (required to induce a 50% effect)
- CLP: EC Regulation 1272/2008
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

GENERAL BIBLIOGRAPHY:

- GHS rev. 5
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh Registry of Toxic Effects of Chemical Substances
- INRS Fiche Toxicologique (toxicological sheet)
- Patty Industrial Hygiene and Toxicology
- N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals Ministry of Health and ISS (Istituto Superiore di Sanità) Italy
- Hazard Products Regulation (HPR)
- WHMIS 2015
- ONTARIO R.R.O. 1990, Regulation 883 (version July 2016)
- IARC website
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.