

Safety Data Sheet

C67 UNIHARDENER UHS SLOW



Safety Data Sheet dated 6/28/2022, version 3

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade code and name: C67 UNIHARDENER UHS SLOW

Recommended use of the chemical and restrictions on use

Recommended use:

Acrylic hardener for 2K clearcoat for autobody use.

Restrictions on use:

Only for professional use.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company:

Industria Chimica Reggiana I.C.R. Spa

(subject to management and coordination by sole shareholder company PPG Industries Inc.)

Via Gasparini, 7 42124 REGGIO EMILIA Italia

Tel. +39 0522/517803 Fax +39 0522/514384

Competent person responsible for the safety data sheet:

sdsre@icrsprint.it

Emergency phone number

Via Gasparini, 7 42124 REGGIO EMILIA Italia

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2. HAZARD(S) IDENTIFICATION

Classification of the chemical

- ⚠ Warning, STOT SE 3, May cause drowsiness or dizziness.
- ⚠ Danger, Flam. Liq. 2, Highly flammable liquid and vapour.
- ⚠ Warning, Acute Tox. 4, Harmful if inhaled.
- ⚠ Warning, Skin Sens. 1, May cause an allergic skin reaction.
- ⚠ Warning, STOT SE 3, May cause respiratory irritation.
- Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Label elements

Hazard pictograms:



Danger

Hazard statements:

H336 May cause drowsiness or dizziness.

H225 Highly flammable liquid and vapour.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from open flames - No smoking.

P260 Do not breathe vapours or spray.

P273 Avoid release to the environment.

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P280.D Wear protective gloves and clothing and eye protection.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Special Provisions:

None

Contains

2-butoxyethyl acetate
tosyl isocyanate
4-methylpentan-2-one
Naphtha
Hexamethylene-di-isocyanate (polymer)

Hazards not otherwise classified identified during the classification process:

None

Ingredient(s) with unknown acute toxicity:

None.

Additional classification information

NFPA rating:



HMIS rating:

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		1
PERSONAL PROTECTION		H

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

>= 50% - < 60% Hexamethylene-di-isocyanate (homopolymer)

REACH No.: 01-2119485796-17, CAS: 28182-81-2, EC: 931-274-8

⚠ A.1/4/Inhal Acute Tox. 4 H332

⚠ A.8/3 STOT SE 3 H335

⚠ A.4.2/1 Skin Sens. 1 H317

>= 15% - < 20% Naphtha - hydrocarbons C9 aromatics

REACH No.: 01-2119455851-35, CAS: 64742-95-6, EC: 918-668-5

⚠ B.6/3 Flam. Liq. 3 H226

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- ⚠ A.8/3 STOT SE 3 H335
- ⚠ A.10/1 Asp. Tox. 1 H304
- ⚠ A.8/3 STOT SE 3 H336
- ⚠ US-HAE/C2 Aquatic Chronic 2 H411

>= 7% - < 10% 4-methylpentan-2-one

REACH No.: 01-2119473980-30, Index number: 606-004-00-4, CAS: 108-10-1, EC: 203-550-1

- ⚠ B.6/2 Flam. Liq. 2 H225
- ⚠ A.3/2A Eye Irrit. 2A H319
- ⚠ A.8/3 STOT SE 3 H335
- ⚠ A.1/4/Inhal Acute Tox. 4 H332

>= 3% - < 5% 2-butoxyethyl acetate

REACH No.: 01-2119475112-47, Index number: 607-038-00-2, CAS: 112-07-2, EC: 203-933-3

- ⚠ A.1/4/Dermal Acute Tox. 4 H312
- ⚠ A.1/4/Inhal Acute Tox. 4 H332

>= 3% - < 5% n-butyl acetate

REACH No.: 01-2119485493-29, Index number: 607-025-00-1, CAS: 123-86-4, EC: 204-658-1

- ⚠ B.6/3 Flam. Liq. 3 H226
- ⚠ A.8/3 STOT SE 3 H336

4. FIRST-AID MEASURES

Description of necessary measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. If irritation persists: Get medical advice/attention.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

Most important symptoms/effects, acute and delayed

See section 11 for known symptoms and effects.

Indication of immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

Unsuitable extinguishing media:

None in particular.

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Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke. Carbon oxides.

Hazardous combustion products:

None

Explosive properties: N.D.

Oxidizing properties: N.D.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

Methods and materials for containment and cleaning up

Wash with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not use on extensive surface areas in premises where there are occupants.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

Storage temperature:

Store at ambient temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

EU - STEL: 1 mg/m³

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

EU - TWA(8h): 100 mg/m³, 19 ppm

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- 4-methylpentan-2-one - CAS: 108-10-1
Italy - TWA(8h): 83 mg/m³, 20 ppm - STEL(): 208 mg/m³, 50 ppm
ACGIH - TWA(8h): 20 ppm - STEL: 75 ppm - Notes: A3, BEI - URT irr, dizziness, headache
EU - TWA(8h): 83 mg/m³, 20 ppm - STEL: 208 mg/m³, 50 ppm
- 2-butoxyethyl acetate - CAS: 112-07-2
EU - TWA(8h): 133 mg/m³, 20 ppm - STEL: 333 mg/m³, 50 ppm - Notes: Skin
ACGIH - TWA(8h): 20 ppm - Notes: A3 - Hemolysis
- n-butyl acetate - CAS: 123-86-4
EU - TWA(8h): 241 mg/m³, 50 ppm - STEL: 723 mg/m³, 150 ppm
ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr
- DNEL Exposure Limit Values
- Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2
Worker Professional: 1 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 0.5 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
- Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6
Worker Professional: 25 mg/kg - Consumer: 11 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 150 mg/m³ - Consumer: 32 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 11 mg/m³ - Exposure: Human Oral - Frequency: Long Term, systemic effects
- 4-methylpentan-2-one - CAS: 108-10-1
Worker Professional: 83 mg/m³ - Consumer: 14.7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 208 mg/m³ - Consumer: 115.2 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 83 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 208 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 11.8 mg/kg - Consumer: 4.2 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
- 2-butoxyethyl acetate - CAS: 112-07-2
Worker Professional: 133 mg/m³ - Consumer: 67 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 27 mg/kg - Exposure: Human Dermal - Frequency: Short Term, systemic effects - Notes: bw/day
Consumer: 4.3 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects - Notes: bw/day
Consumer: 18 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic effects - Notes: bw/day
Worker Professional: 773 mg/m³ - Consumer: 499 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 333 mg/m³ - Consumer: 166 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 102 mg/kg - Consumer: 36 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects - Notes: bw/day
- n-butyl acetate - CAS: 123-86-4
Consumer: 102.34 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 960 mg/m³ - Consumer: 859.7 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

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Worker Professional: 960 mg/m³ - Consumer: 859.7 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Professional: 480 mg/m³ - Consumer: 102.34 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 480 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

PNEC Exposure Limit Values

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

Target: Fresh Water - Value: 127 µg/L

Target: Marine water - Value: 12.7 µg/L

Target: Fresh water (intermittent emissions) - Value: 1270 µg/L

Target: Freshwater sediments - Value: 266.7 g/kg

Target: Soil - Value: 53.2 g/kg

Target: STP - Value: 38.28 mg/l - Notes: OECD 209

4-methylpentan-2-one - CAS: 108-10-1

Target: Soil - Value: 1.3 mg/kg

Target: Freshwater sediments - Value: 8.27 mg/kg

Target: Marine water sediments - Value: 0.83 mg/kg

Target: Fresh Water - Value: 0.6 mg/l

Target: Marine water - Value: 0.06 mg/l

Target: Intermittent emissions - Value: 1.5 mg/l

Target: Purification plant - Value: 27.5 mg/l

2-butoxyethyl acetate - CAS: 112-07-2

Target: Purification plant - Value: 90 mg/l

Target: Fresh Water - Value: 0.304 mg/l

Target: Marine water - Value: 0.0304 mg/l

Target: Intermittent emissions - Value: 0.56 mg/l

Target: Freshwater sediments - Value: 2.03 mg/kg

Target: Marine water sediments - Value: 0.203 mg/kg

Target: Soil - Value: 0.68 mg/kg

Target: Oral - Value: 0.06 g/kg

n-butyl acetate - CAS: 123-86-4

Target: STP - Value: 35.6 mg/l

Target: Fresh Water - Value: 0.18 mg/l

Target: Marine water - Value: 0.01 mg/l

Target: Intermittent emissions - Value: 0.36 mg/l

Target: Freshwater sediments - Value: 0.98 mg/kg

Target: Marine water sediments - Value: 0.09 mg/kg

Target: Soil - Value: 0.09 mg/kg

Biological Exposure Index

4-methylpentan-2-one - CAS: 108-10-1

Value: 1 mg/L - medium: Urine - Biological Indicator: Ketone (s) - Sampling Period: End of turn

Appropriate engineering controls:

None

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, EN374 Class 3 (B-F-I). Permeation time > 60 minutes; 0.4 mm thickness.

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Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Use adequate protective respiratory equipment.

Thermal Hazards:

None

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and color:	Transparent colorless liquid
Odor:	Typical del solvante
Odor threshold:	N.D.
pH:	N.A. (organic solvent)
Melting point / freezing point:	-58 °F
Initial boiling point and boiling range:	240.8 °F
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.D.
Vapour density:	N.D.
Flash point:	64.4 °F
Evaporation rate:	N.D.
Vapour pressure:	20.93 hPa
Relative density:	1.018 ±0.030 g/cm ³
Solubility in water:	Insoluble
Solubility in oil:	N.D.
Auto-ignition temperature:	> 752 °F
Decomposition temperature:	N.D.
Viscosity:	> 20.5 mm ² /s (40 °C)
Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions

Chemical stability

Stable under normal conditions

Possibility of hazardous reactions

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth, alloys in powder or vapours) and powerful reducing agents.

It may generate toxic gases on contact with oxidising mineral acids, and powerful oxidising agents.

It may catch fire on contact with oxidising mineral acids, and powerful oxidising agents.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

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Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2500 mg/kg

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 0.39 mg/kg - Duration: 4h

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin Yes

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 6193 mg/m³ - Source: OECD 403

Test: LD50 - Route: Oral - Species: Rat = 3492 mg/kg - Source: OECD 401

Test: LD50 - Route: Skin - Species: Rabbit > 3160 mg/kg - Source: OECD 402

4-methylpentan-2-one - CAS: 108-10-1

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Mouse = 23.29 g/m³

Test: LD50 - Route: Oral - Species: Rat = 2080 mg/kg

Test: LD50 - Route: Skin - Species: Rat = 2000 g/kg

i) STOT-repeated exposure:

Test: NOAEL(C) - Route: Inhalation - Species: Rat > 250 mg/kg

2-butoxyethyl acetate - CAS: 112-07-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 2400 mg/kg

Test: LD50 - Route: Oral - Species: Mouse = 3200 mg/kg

Test: LD50 - Route: Skin - Species: Rat = 1580 mg/kg

n-butyl acetate - CAS: 123-86-4

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 6400 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 21.1 mg/l - Duration: 4h

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

Local effects:

High vapour concentrations may cause irritation to respiratory system.

May cause slight skin irritation with prolonged or repeated contact.

May cause eye irritation.

Sensitization:

Considered as skin sensitizing.

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

Inhalation: Vapor concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches and dizziness, are anesthetic and may cause other central nervous system effects. Contact with the skin: Low index of toxicity

Frequent or prolonged contact can dry the skin favoring the onset of dermatitis. Eye Contact: May cause slight eye discomfort with mild irritation, but does not damage eye tissue.

Ingestion: even small quantities of liquid introduced into the respiratory system during ingestion or by vomiting, can cause bronchopneumonia or pulmonary edema. minimal index of toxicity.

n-butyl acetate - CAS: 123-86-4

Components of the product can be absorbed by the body by inhalation. Main symptoms: Dizziness, narcosis, Cough, nausea, vomiting, headache, unconsciousness, shortness of breath. Repeated exposure can cause skin dryness and cracking.

Substance(s) listed on the NTP report on Carcinogens:

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None.

Substance(s) listed on the IARC Monographs:
4-methylpentan-2-one - Group 2B.

Substance(s) listed as OSHA Carcinogen(s):
None.

Substance(s) listed as NIOSH Carcinogen(s):
None.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 8.9 mg/l

Endpoint: LC50 - Species: Daphnia = 127 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 1000 mg/l

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 3.2 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 2.9 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 9.2 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 1 mg/l - Duration h: 72 - Notes: NOELR

4-methylpentan-2-one - CAS: 108-10-1

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia > 200 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish > 179 mg/l - Duration h: 96

Endpoint: NOEC - Species: Daphnia = 30 mg/l

Endpoint: NOEC - Species: Algae > 146 mg/l

n-butyl acetate - CAS: 123-86-4

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 44 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 648 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 18 mg/l - Duration h: 96

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

None

13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force. DO NOT discharge into sewers, watercourses, ponds, canals or ditches. Empty product containers must be completely drained and stored safely until appropriately processes or disposed. Empty containers must be recycled, recovered or disposed of by a qualified and authorized company operating in compliance with current recycling, recovery and disposal regulations. It is advisable to provide the desposal company with all safety information of the material contained in the empty packaging. DO NOT pressurize, DO NOT cut, DO NOT weld, DO NOT puncture, DO NOT crush, DO NOT expose

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empty containers to heat, flames, sparks, electrostatic discharge or other sources of ignition.

14. TRANSPORT INFORMATION



UN number

ADR-UN Number: 1263
IATA-UN Number: 1263
IMDG-UN Number: 1263

UN proper shipping name

ADR-Shipping Name: PAINT
IATA-Shipping Name: PAINT
IMDG-Shipping Name: PAINT

Transport hazard class(es)

ADR-Class: 3
ADR-Label: 3
ADR - Hazard identification number: 33
IATA-Class: 3
IATA-Label: 3
IMDG-Class: 3
IMDG-Class: 3

Packing group

ADR-Packing Group: II
IATA-Packing group: II
IMDG-Packing group: II

Environmental hazards

ADR-Environmental Pollutant: No
IMDG-Marine pollutant: No

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)
N.A.

Special precautions

ADR-Subsidiary hazards: -
ADR-S.P.: 163 367 640C 650
ADR-Transport category (Tunnel restriction code): 2 (D/E)
IATA-Passenger Aircraft: 353
IATA-Subsidiary hazards: -
IATA-Cargo Aircraft: 364
IATA-S.P.: A3 A72 A192
IATA-ERG: 3L
IMDG-EmS: F-E , S-E
IMDG-Subsidiary hazards: -
IMDG-Stowage and handling: Category B
IMDG-Segregation: -

15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

List of substances included in the TSCA inventory: Hexamethylene-di-isocyanate

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(homopolymer), 4-methylpentan-2-one, 2-butoxyethyl acetate, n-butyl acetate.

List of substances not included in the TSCA inventory: Naphtha - hydrocarbons C9 aromatics.

TSCA listed substances:

Hexamethylene-di-isocyanate (homopolymer) is listed in TSCA Section 8b

4-methylpentan-2-one is listed in TSCA Section 8b, Section 8d HSDR

2-butoxyethyl acetate is listed in TSCA Section 8b

n-butyl acetate is listed in TSCA Section 8b.

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances: no substances listed.

Section 304 - Hazardous substances: 4-methylpentan-2-one, n-butyl acetate.

Section 313 - Toxic chemical list: 4-methylpentan-2-one.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA: 4-methylpentan-2-one - Reportable quantity: 5000 pounds

n-butyl acetate - Reportable quantity: 5000 pounds.

Reportable quantity for mixture: 5102.040816 pounds.

CAA - Clean Air Act

CAA listed substances:

4-methylpentan-2-one is listed in CAA Section 111, Section 112(b) - HAP, Section 112(b) - HON

2-butoxyethyl acetate is listed in CAA Section 111, Section 112(b) - HON

n-butyl acetate is listed in CAA Section 111.

CWA - Clean Water Act

CWA listed substances:

4-methylpentan-2-one is listed in CWA Section 304

n-butyl acetate is listed in CWA Section 304, Section 311.

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

4-methylpentan-2-one - Listed as carcinogen and reproductive toxicant.

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

4-methylpentan-2-one

n-butyl acetate.

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

4-methylpentan-2-one

2-butoxyethyl acetate

n-butyl acetate.

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

4-methylpentan-2-one

n-butyl acetate.

16. OTHER INFORMATION

Full text of phrases referred to in Section 3:

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H317 May cause an allergic skin reaction.

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

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H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H312 Harmful in contact with skin.

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Sections modified from the previous revision:

3. COMPOSITION/INFORMATION ON INGREDIENTS
6. ACCIDENTAL RELEASE MEASURES
7. HANDLING AND STORAGE
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
9. PHYSICAL AND CHEMICAL PROPERTIES
11. TOXICOLOGICAL INFORMATION
12. ECOLOGICAL INFORMATION
SECTION 14: Transport information

Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This Safety Data Sheet cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE: Acute Toxicity Estimate
ATEmix: Acute toxicity Estimate (Mixtures)
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CLP: Classification, Labeling, Packaging.
DNEL: Derived No Effect Level.
EINECS: European Inventory of Existing Commercial Chemical Substances.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration.

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PNEC: Predicted No Effect Concentration.
RID: Regulation Concerning the International Transport of Dangerous Goods
by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWA: Time-weighted average

Safety Data Sheet

C68 UNIHARDENER UHS NORMAL



Safety Data Sheet dated 6/29/2022, version 4

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade code and name: C68 UNIHARDENER UHS NORMAL

Recommended use of the chemical and restrictions on use

Recommended use:

Acrylic hardener for 2K clearcoat for autobody use.

Restrictions on use:

Only for professional use.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party
Company:

Industria Chimica Reggiana I.C.R. Spa

(subject to management and coordination by sole shareholder company PPG Industries Inc.)

Via Gasparini, 7 42124 REGGIO EMILIA Italia

Tel. +39 0522/517803 Fax +39 0522/514384

Competent person responsible for the safety data sheet:

sdsre@icrsprint.it

Emergency phone number

Via Gasparini, 7 42124 REGGIO EMILIA Italia

Tel. +39 0522/517803 Fax +39 0522/514384

2. HAZARD(S) IDENTIFICATION

Classification of the chemical

- ⚠ Danger, Flam. Liq. 2, Highly flammable liquid and vapour.
- ⚠ Warning, Acute Tox. 4, Harmful if inhaled.
- ⚠ Warning, Skin Sens. 1, May cause an allergic skin reaction.
- ⚠ Warning, STOT SE 3, May cause respiratory irritation.
- ⚠ Warning, STOT SE 3, May cause drowsiness or dizziness.
- Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Label elements

Hazard pictograms:



Danger

Hazard statements:

H225 Highly flammable liquid and vapour.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from open flames - No smoking.

P233 Keep container tightly closed.

P261 Avoid breathing vapours or spray.

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P273 Avoid release to the environment.

P280.D Wear protective gloves and clothing and eye protection.

Special Provisions:

None

Hazards not otherwise classified identified during the classification process:

None

Ingredient(s) with unknown acute toxicity:

None.

Additional classification information

NFPA rating:



HMIS rating:

HEALTH	/	2
FLAMMABILITY		3
PHYSICAL HAZARD		1
PERSONAL PROTECTION		H

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

>= 50% - < 60% Hexamethylene-di-isocyanate (homopolymer)

REACH No.: 01-2119485796-17, CAS: 28182-81-2, EC: 931-274-8

⚠ A.1/4/Inhal Acute Tox. 4 H332

⚠ A.8/3 STOT SE 3 H335

⚠ A.4.2/1 Skin Sens. 1 H317

>= 30% - < 40% 4-methylpentan-2-one

REACH No.: 01-2119473980-30, Index number: 606-004-00-4, CAS: 108-10-1, EC: 203-550-1

⚠ B.6/2 Flam. Liq. 2 H225

⚠ A.3/2A Eye Irrit. 2A H319

⚠ A.8/3 STOT SE 3 H335

⚠ A.1/4/Inhal Acute Tox. 4 H332

>= 5% - < 7% ethyl acetate

REACH No.: 01-2119475103-46, Index number: 607-022-00-5, CAS: 141-78-6, EC: 205-500-4

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- ◆ B.6/2 Flam. Liq. 2 H225
- ◆ A.3/2A Eye Irrit. 2A H319
- ◆ A.8/3 STOT SE 3 H336

>= 3% - < 5% n-butyl acetate

REACH No.: 01-2119485493-29, Index number: 607-025-00-1, CAS: 123-86-4, EC: 204-658-1

- ◆ B.6/3 Flam. Liq. 3 H226
- ◆ A.8/3 STOT SE 3 H336

>= 3% - < 5% Naphtha - hydrocarbons C9 aromatics

REACH No.: 01-2119455851-35, CAS: 64742-95-6, EC: 918-668-5

- ◆ B.6/3 Flam. Liq. 3 H226
- ◆ A.8/3 STOT SE 3 H335
- ◆ A.10/1 Asp. Tox. 1 H304
- ◆ A.8/3 STOT SE 3 H336
- ◆ US-HAE/C2 Aquatic Chronic 2 H411

>= 0.25% - < 0.5% tosyl isocyanate

Index number: 615-012-00-7, CAS: 4083-64-1, EC: 223-810-8

- ◆ A.3/2A Eye Irrit. 2A H319
- ◆ A.8/3 STOT SE 3 H335
- ◆ A.2/2 Skin Irrit. 2 H315
- ◆ A.4.1/1 Resp. Sens. 1 H334

4. FIRST-AID MEASURES

Description of necessary measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. If irritation persists: Get medical advice/attention.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

Most important symptoms/effects, acute and delayed

See section 11 for known symptoms and effects.

Indication of immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

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Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke. Carbon oxides.

Hazardous combustion products:

None

Explosive properties: N.D.

Oxidizing properties: N.D.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

Methods and materials for containment and cleaning up

Wash with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not use on extensive surface areas in premises where there are occupants.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

Conditions for safe storage, including any incompatibilities

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

Storage temperature:

Store at ambient temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

EU - STEL: 1 mg/m³

4-methylpentan-2-one - CAS: 108-10-1

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Italy - TWA(8h): 83 mg/m³, 20 ppm - STEL(): 208 mg/m³, 50 ppm
ACGIH - TWA(8h): 20 ppm - STEL: 75 ppm - Notes: A3, BEI - URT irr, dizziness, headache
EU - TWA(8h): 83 mg/m³, 20 ppm - STEL: 208 mg/m³, 50 ppm

ethyl acetate - CAS: 141-78-6
EU - TWA(8h): 734 mg/m³, 200 ppm - STEL: 1468 mg/m³, 400 ppm
ACGIH - TWA(8h): 400 ppm - Notes: URT and eye irr

n-butyl acetate - CAS: 123-86-4
EU - TWA(8h): 241 mg/m³, 50 ppm - STEL: 723 mg/m³, 150 ppm
ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6
EU - TWA(8h): 100 mg/m³, 19 ppm

DNEL Exposure Limit Values

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2
Worker Professional: 1 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 0.5 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

4-methylpentan-2-one - CAS: 108-10-1
Worker Professional: 83 mg/m³ - Consumer: 14.7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 208 mg/m³ - Consumer: 115.2 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 83 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 208 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 11.8 mg/kg - Consumer: 4.2 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

ethyl acetate - CAS: 141-78-6
Worker Professional: 1468 mg/m³ - Consumer: 734 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Consumer: 4.5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects
Worker Professional: 734 mg/m³ - Consumer: 367 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 1468 mg/m³ - Consumer: 734 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 63 mg/kg - Consumer: 37 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 734 mg/m³ - Consumer: 367 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

n-butyl acetate - CAS: 123-86-4
Consumer: 102.34 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 960 mg/m³ - Consumer: 859.7 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 960 mg/m³ - Consumer: 859.7 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 480 mg/m³ - Consumer: 102.34 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 480 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6
Worker Professional: 25 mg/kg - Consumer: 11 mg/kg - Exposure: Human Dermal -

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Frequency: Long Term, systemic effects

Worker Professional: 150 mg/m³ - Consumer: 32 mg/m³ - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Consumer: 11 mg/m³ - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

Target: Fresh Water - Value: 127 µg/L

Target: Marine water - Value: 12.7 µg/L

Target: Fresh water (intermittent emissions) - Value: 1270 µg/L

Target: Freshwater sediments - Value: 266.7 g/kg

Target: Soil - Value: 53.2 g/kg

Target: STP - Value: 38.28 mg/l - Notes: OECD 209

4-methylpentan-2-one - CAS: 108-10-1

Target: Soil - Value: 1.3 mg/kg

Target: Freshwater sediments - Value: 8.27 mg/kg

Target: Marine water sediments - Value: 0.83 mg/kg

Target: Fresh Water - Value: 0.6 mg/l

Target: Marine water - Value: 0.06 mg/l

Target: Intermittent emissions - Value: 1.5 mg/l

Target: Purification plant - Value: 27.5 mg/l

ethyl acetate - CAS: 141-78-6

Target: Fresh Water - Value: 0.26 mg/l

Target: Marine water - Value: 0.026 mg/l

Target: Intermittent emissions - Value: 1.65 mg/l

Target: Purification plant - Value: 650 mg/l

Target: Freshwater sediments - Value: 1.25 mg/kg

Target: Marine water sediments - Value: 0.125 mg/kg

Target: Soil - Value: 0.24 mg/kg

Target: Oral - Value: 0.2 g/kg

n-butyl acetate - CAS: 123-86-4

Target: STP - Value: 35.6 mg/l

Target: Fresh Water - Value: 0.18 mg/l

Target: Marine water - Value: 0.01 mg/l

Target: Intermittent emissions - Value: 0.36 mg/l

Target: Freshwater sediments - Value: 0.98 mg/kg

Target: Marine water sediments - Value: 0.09 mg/kg

Target: Soil - Value: 0.09 mg/kg

Biological Exposure Index

4-methylpentan-2-one - CAS: 108-10-1

Value: 1 mg/L - medium: Urine - Biological Indicator: Ketone (s) - Sampling Period: End of turn

Appropriate engineering controls:

None

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, EN374 Class 3 (B-F-I). Permeation time > 60 minutes; 0.4 mm thickness.

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

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Use adequate protective respiratory equipment.
Thermal Hazards:
None

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and color:	Transparent colorless liquid
Odor:	Typical del solvante
Odor threshold:	N.D.
pH:	N.A.(organic solvent)
Melting point / freezing point:	-119.2°F
Initial boiling point and boiling range:	132.8°F
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.D.
Vapour density:	N.D.
Flash point:	-39.2°F
Evaporation rate:	N.D.
Vapour pressure:	20.9 hPa
Relative density:	0.986 ±0.030 g/cm ³
Solubility in water:	Insoluble
Solubility in oil:	N.D.
Auto-ignition temperature:	800.6°F
Decomposition temperature:	N.D.
Viscosity:	> 20.5 mm ² /s (40 °C)
Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

10. STABILITY AND REACTIVITY

Reactivity
Stable under normal conditions

Chemical stability
Stable under normal conditions

Possibility of hazardous reactions
It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth, alloys in powder or vapours) and powerful reducing agents.
It may generate toxic gases on contact with oxidising mineral acids, and powerful oxidising agents.
It may catch fire on contact with oxidising mineral acids, and powerful oxidising agents.

Conditions to avoid
Stable under normal conditions.

Incompatible materials
Avoid contact with combustible materials. The product could catch fire.

Hazardous decomposition products
None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Toxicological information of the product:
N.A.

Toxicological information of the main substances found in the product:
Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2
a) acute toxicity:

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Test: LD50 - Route: Oral - Species: Rat > 2500 mg/kg
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg
Test: LC50 - Route: Inhalation Vapour - Species: Rat = 0.39 mg/kg - Duration: 4h

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin Yes

4-methylpentan-2-one - CAS: 108-10-1

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Mouse = 23.29 g/m³

Test: LD50 - Route: Oral - Species: Rat = 2080 mg/kg

Test: LD50 - Route: Skin - Species: Rat = 2000 g/kg

i) STOT-repeated exposure:

Test: NOAEL(C) - Route: Inhalation - Species: Rat > 250 mg/kg

ethyl acetate - CAS: 141-78-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat = 1600 mg/l

Test: LD50 - Route: Oral - Species: Rabbit = 4935 mg/kg

Test: LD50 - Route: Oral - Species: Rat = 11.3 g/kg

n-butyl acetate - CAS: 123-86-4

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 6400 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 21.1 mg/l - Duration: 4h

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 6193 mg/m³ - Source: OECD 403

Test: LD50 - Route: Oral - Species: Rat = 3492 mg/kg - Source: OECD 401

Test: LD50 - Route: Skin - Species: Rabbit > 3160 mg/kg - Source: OECD 402

tosyl isocyanate - CAS: 4083-64-1

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 2234 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 640 ppm - Duration: 1h

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

Local effects:

High vapour concentrations may cause irritation to respiratory system.

May cause slight skin irritation with prolonged or repeated contact.

May cause eye irritation.

Sensitization:

Considered as skin sensitizing.

n-butyl acetate - CAS: 123-86-4

Components of the product can be absorbed by the body by inhalation. Main symptoms: Dizziness, narcosis, Cough, nausea, vomiting, headache, unconsciousness, shortness of breath. Repeated exposure can cause skin dryness and cracking.

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

Inhalation: Vapor concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches and dizziness, are anesthetic and may cause other central nervous system effects. Contact with the skin: Low index of toxicity. Frequent or prolonged contact can dry the skin favoring the onset of dermatitis. Eye Contact: May cause slight eye discomfort with mild irritation, but does not damage eye tissue. Ingestion: even small quantities of liquid introduced into the respiratory system during ingestion or by vomiting, can cause bronchopneumonia or pulmonary edema. minimal index of toxicity.

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Substance(s) listed on the NTP report on Carcinogens:

None.

Substance(s) listed on the IARC Monographs:

4-methylpentan-2-one - Group 2B.

Substance(s) listed as OSHA Carcinogen(s):

None.

Substance(s) listed as NIOSH Carcinogen(s):

None.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 8.9 mg/l

Endpoint: LC50 - Species: Daphnia = 127 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 1000 mg/l

4-methylpentan-2-one - CAS: 108-10-1

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia > 200 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish > 179 mg/l - Duration h: 96

Endpoint: NOEC - Species: Daphnia = 30 mg/l

Endpoint: NOEC - Species: Algae > 146 mg/l

ethyl acetate - CAS: 141-78-6

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 230 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 165 mg/l - Duration h: 48

Endpoint: NOEC - Species: Algae > 100 mg/l - Duration h: 72

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia = 2.4 mg/l - Duration h: 504

c) Bacteria toxicity:

Endpoint: EC50 - Species: Bacteria = 5870 mg/l - Duration h: 0.25

n-butyl acetate - CAS: 123-86-4

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 44 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 648 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 18 mg/l - Duration h: 96

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 3.2 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 2.9 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 9.2 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 1 mg/l - Duration h: 72 - Notes: NOELR

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

None

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13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force. DO NOT discharge into sewers, watercourses, ponds, canals or ditches. Empty product containers must be completely drained and stored safely until appropriately processes or disposed. Empty containers must be recycled, recovered or disposed of by a qualified and authorized company operating in compliance with current recycling, recovery and disposal regulations. It is advisable to provide the desposal company with all safety information of the material contained in the empty packaging. DO NOT pressurize, DO NOT cut, DO NOT weld, DO NOT puncture, DO NOT crush, DO NOT expose empty containers to heat, flames, sparks, electrostatic discharge or other sources of ignition.

14. TRANSPORT INFORMATION



UN number

ADR-UN Number: 1263

DOT number: UN1263

IATA-UN Number: 1263

IMDG-UN Number: 1263

UN proper shipping name

ADR-Shipping Name: PAINT

DOT-Shipping Name: Paint including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base or Paint related material including paint thinning, drying, removing, or reducing compound

IATA-Shipping Name: PAINT

IMDG-Shipping Name: PAINT

Transport hazard class(es)

ADR-Class: 3

DOT Hazard Class: 3

ADR-Label: 3

ADR - Hazard identification number: 33

IATA-Class: 3

IATA-Label: 3

IMDG-Class: 3

IMDG-Class: 3

Packing group

ADR-Packing Group: II

DOT Packing group: II

IATA-Packing group: II

IMDG-Packing group: II

Environmental hazards

ADR-Enviromental Pollutant: No

IMDG-Marine pollutant: No

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

N.A.

Special precautions

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DOT Special provisions: 149, 367, B52, B131, IB2, T4, TP1, TP8, TP28
DOT Labels: 3
ADR-Subsidiary hazards: -
ADR-S.P.: 163 367 640C 650
ADR-Transport category (Tunnel restriction code): 2 (D/E)
IATA-Passenger Aircraft: 353
IATA-Subsidiary hazards: -
IATA-Cargo Aircraft: 364
IATA-S.P.: A3 A72 A192
IATA-ERG: 3L
IMDG-EmS: F-E , S-E
IMDG-Subsidiary hazards: -
IMDG-Stowage and handling: Category B
IMDG-Segregation: -

15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

List of substances included in the TSCA inventory: Hexamethylene-di-isocyanate (homopolymer), 4-methylpentan-2-one, ethyl acetate, n-butyl acetate, tosyl isocyanate.

List of substances not included in the TSCA inventory: Naphtha - hydrocarbons C9 aromatics.

TSCA listed substances:

Hexamethylene-di-isocyanate (homopolymer) is listed in TSCA Section 8b

4-methylpentan-2-one is listed in TSCA Section 8b, Section 8d HSDR

ethyl acetate is listed in TSCA Section 8b

n-butyl acetate is listed in TSCA Section 8b

tosyl isocyanate is listed in TSCA Section 8b.

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances: no substances listed.

Section 304 - Hazardous substances: 4-methylpentan-2-one, ethyl acetate, n-butyl acetate.

Section 313 - Toxic chemical list: 4-methylpentan-2-one.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA: 4-methylpentan-2-one - Reportable quantity: 5000 pounds

ethyl acetate - Reportable quantity: 5000 pounds

n-butyl acetate - Reportable quantity: 5000 pounds.

Reportable quantity for mixture: 1479.289941 pounds.

CAA - Clean Air Act

CAA listed substances:

4-methylpentan-2-one is listed in CAA Section 111, Section 112(b) - HAP, Section 112(b) - HON

ethyl acetate is listed in CAA Section 111

n-butyl acetate is listed in CAA Section 111.

CWA - Clean Water Act

CWA listed substances:

4-methylpentan-2-one is listed in CWA Section 304

ethyl acetate is listed in CWA Section 304

n-butyl acetate is listed in CWA Section 304, Section 311.

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

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4-methylpentan-2-one - Listed as carcinogen and reproductive toxicant.

Massachusetts Right to know
Substance(s) listed under Massachusetts Right to know:
4-methylpentan-2-one
ethyl acetate
n-butyl acetate.

New Jersey Right to know
Substance(s) listed under New Jersey Right to know:
4-methylpentan-2-one
ethyl acetate
n-butyl acetate.

Pennsylvania Right to know
Substance(s) listed under Pennsylvania Right to know:
4-methylpentan-2-one
ethyl acetate
n-butyl acetate.

16. OTHER INFORMATION

Full text of phrases referred to in Section 3:

H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H317 May cause an allergic skin reaction.
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
H315 Causes skin irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Safety Data Sheet dated 6/29/2022, version 4
Sections modified from the previous revision:

2. HAZARD(S) IDENTIFICATION
4. FIRST-AID MEASURES
5. FIRE-FIGHTING MEASURES
7. HANDLING AND STORAGE
9. PHYSICAL AND CHEMICAL PROPERTIES
10. STABILITY AND REACTIVITY
SECTION 14: Transport information

Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This Safety Data Sheet cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of
Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

Safety Data Sheet

C68 UNIHARDENER UHS NORMAL

ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average

Safety Data Sheet

C69 UNIHARDENER UHS FAST



Safety Data Sheet dated 6/29/2022, version 1

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade code and name: C69 UNIHARDENER UHS FAST

Recommended use of the chemical and restrictions on use

Recommended use:

Acrylic hardener for 2K clearcoat for autobody use.

Restrictions on use:

Only for professional use.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party
Company:

Industria Chimica Reggiana I.C.R. Spa

(subject to management and coordination by sole shareholder company PPG Industries Inc.)

Via Gasparini, 7 42124 REGGIO EMILIA Italia

Tel. +39 0522/517803 Fax +39 0522/514384

Competent person responsible for the safety data sheet:

sdsre@icrsprint.it

Emergency phone number

Via Gasparini, 7 42124 REGGIO EMILIA Italia

Tel. +39 0522/517803 Fax +39 0522/514384

2. HAZARD(S) IDENTIFICATION

Classification of the chemical

- ⚠ Danger, Flam. Liq. 2, Highly flammable liquid and vapour.
- ⚠ Warning, Acute Tox. 4, Harmful if inhaled.
- ⚠ Warning, Skin Sens. 1, May cause an allergic skin reaction.
- ⚠ Warning, STOT SE 3, May cause respiratory irritation.
- ⚠ Warning, STOT SE 3, May cause drowsiness or dizziness.
- Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Label elements

Hazard pictograms:



Danger

Hazard statements:

H225 Highly flammable liquid and vapour.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from open flames - No smoking.

P233 Keep container tightly closed.

P261 Avoid breathing vapours or spray.

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P273 Avoid release to the environment.

P280.D Wear protective gloves and clothing and eye protection.

Special Provisions:

None

Hazards not otherwise classified identified during the classification process:

None

Ingredient(s) with unknown acute toxicity:

None.

Additional classification information

NFPA rating:



HMIS rating:

HEALTH	/	2
FLAMMABILITY		3
PHYSICAL HAZARD		1
PERSONAL PROTECTION		H

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

>= 50% - < 60% Hexamethylene-di-isocyanate (homopolymer)

REACH No.: 01-2119485796-17, CAS: 28182-81-2, EC: 931-274-8

⚠ A.1/4/Inhal Acute Tox. 4 H332

⚠ A.8/3 STOT SE 3 H335

⚠ A.4.2/1 Skin Sens. 1 H317

>= 30% - < 40% 4-methylpentan-2-one

REACH No.: 01-2119473980-30, Index number: 606-004-00-4, CAS: 108-10-1, EC: 203-550-1

⚠ B.6/2 Flam. Liq. 2 H225

⚠ A.3/2A Eye Irrit. 2A H319

⚠ A.8/3 STOT SE 3 H335

⚠ A.1/4/Inhal Acute Tox. 4 H332

>= 5% - < 7% ethyl acetate

REACH No.: 01-2119475103-46, Index number: 607-022-00-5, CAS: 141-78-6, EC: 205-500-4

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- ⚠ B.6/2 Flam. Liq. 2 H225
- ⚠ A.3/2A Eye Irrit. 2A H319
- ⚠ A.8/3 STOT SE 3 H336

>= 3% - < 5% n-butyl acetate

REACH No.: 01-2119485493-29, Index number: 607-025-00-1, CAS: 123-86-4, EC: 204-658-1

- ⚠ B.6/3 Flam. Liq. 3 H226
- ⚠ A.8/3 STOT SE 3 H336

>= 3% - < 5% Naphtha - hydrocarbons C9 aromatics

REACH No.: 01-2119455851-35, CAS: 64742-95-6, EC: 918-668-5

- ⚠ B.6/3 Flam. Liq. 3 H226
- ⚠ A.8/3 STOT SE 3 H335
- ⚠ A.10/1 Asp. Tox. 1 H304
- ⚠ A.8/3 STOT SE 3 H336
- ⚠ US-HAE/C2 Aquatic Chronic 2 H411

>= 0.25% - < 0.5% tosyl isocyanate

Index number: 615-012-00-7, CAS: 4083-64-1, EC: 223-810-8

- ⚠ A.3/2A Eye Irrit. 2A H319
- ⚠ A.8/3 STOT SE 3 H335
- ⚠ A.2/2 Skin Irrit. 2 H315
- ⚠ A.4.1/1 Resp. Sens. 1 H334

4. FIRST-AID MEASURES

Description of necessary measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. If irritation persists: Get medical advice/attention.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

Most important symptoms/effects, acute and delayed

See section 11 for known symptoms and effects.

Indication of immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

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Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke. Carbon oxides.

Hazardous combustion products:

None

Explosive properties: N.D.

Oxidizing properties: N.D.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

Methods and materials for containment and cleaning up

Wash with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not use on extensive surface areas in premises where there are occupants.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

Conditions for safe storage, including any incompatibilities

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

Storage temperature:

Store at ambient temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

EU - STEL: 1 mg/m³

4-methylpentan-2-one - CAS: 108-10-1

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Italy - TWA(8h): 83 mg/m³, 20 ppm - STEL(): 208 mg/m³, 50 ppm
ACGIH - TWA(8h): 20 ppm - STEL: 75 ppm - Notes: A3, BEI - URT irr, dizziness, headache
EU - TWA(8h): 83 mg/m³, 20 ppm - STEL: 208 mg/m³, 50 ppm

ethyl acetate - CAS: 141-78-6
EU - TWA(8h): 734 mg/m³, 200 ppm - STEL: 1468 mg/m³, 400 ppm
ACGIH - TWA(8h): 400 ppm - Notes: URT and eye irr

n-butyl acetate - CAS: 123-86-4
EU - TWA(8h): 241 mg/m³, 50 ppm - STEL: 723 mg/m³, 150 ppm
ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6
EU - TWA(8h): 100 mg/m³, 19 ppm

DNEL Exposure Limit Values

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2
Worker Professional: 1 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 0.5 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

4-methylpentan-2-one - CAS: 108-10-1
Worker Professional: 83 mg/m³ - Consumer: 14.7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 208 mg/m³ - Consumer: 115.2 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 83 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 208 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 11.8 mg/kg - Consumer: 4.2 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

ethyl acetate - CAS: 141-78-6
Worker Professional: 1468 mg/m³ - Consumer: 734 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Consumer: 4.5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects
Worker Professional: 734 mg/m³ - Consumer: 367 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 1468 mg/m³ - Consumer: 734 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 63 mg/kg - Consumer: 37 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 734 mg/m³ - Consumer: 367 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

n-butyl acetate - CAS: 123-86-4
Consumer: 102.34 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 960 mg/m³ - Consumer: 859.7 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 960 mg/m³ - Consumer: 859.7 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 480 mg/m³ - Consumer: 102.34 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 480 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6
Worker Professional: 25 mg/kg - Consumer: 11 mg/kg - Exposure: Human Dermal -

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Frequency: Long Term, systemic effects

Worker Professional: 150 mg/m³ - Consumer: 32 mg/m³ - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Consumer: 11 mg/m³ - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

Target: Fresh Water - Value: 127 µg/L

Target: Marine water - Value: 12.7 µg/L

Target: Fresh water (intermittent emissions) - Value: 1270 µg/L

Target: Freshwater sediments - Value: 266.7 g/kg

Target: Soil - Value: 53.2 g/kg

Target: STP - Value: 38.28 mg/l - Notes: OECD 209

4-methylpentan-2-one - CAS: 108-10-1

Target: Soil - Value: 1.3 mg/kg

Target: Freshwater sediments - Value: 8.27 mg/kg

Target: Marine water sediments - Value: 0.83 mg/kg

Target: Fresh Water - Value: 0.6 mg/l

Target: Marine water - Value: 0.06 mg/l

Target: Intermittent emissions - Value: 1.5 mg/l

Target: Purification plant - Value: 27.5 mg/l

ethyl acetate - CAS: 141-78-6

Target: Fresh Water - Value: 0.26 mg/l

Target: Marine water - Value: 0.026 mg/l

Target: Intermittent emissions - Value: 1.65 mg/l

Target: Purification plant - Value: 650 mg/l

Target: Freshwater sediments - Value: 1.25 mg/kg

Target: Marine water sediments - Value: 0.125 mg/kg

Target: Soil - Value: 0.24 mg/kg

Target: Oral - Value: 0.2 g/kg

n-butyl acetate - CAS: 123-86-4

Target: STP - Value: 35.6 mg/l

Target: Fresh Water - Value: 0.18 mg/l

Target: Marine water - Value: 0.01 mg/l

Target: Intermittent emissions - Value: 0.36 mg/l

Target: Freshwater sediments - Value: 0.98 mg/kg

Target: Marine water sediments - Value: 0.09 mg/kg

Target: Soil - Value: 0.09 mg/kg

Biological Exposure Index

4-methylpentan-2-one - CAS: 108-10-1

Value: 1 mg/L - medium: Urine - Biological Indicator: Ketone (s) - Sampling Period: End of turn

Appropriate engineering controls:

None

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, EN374 Class 3 (B-F-I). Permeation time > 60 minutes; 0.4 mm thickness.

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

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Use adequate protective respiratory equipment.
Thermal Hazards:
None

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and color:	Transparent colorless liquid
Odor:	Typical del solvante
Odor threshold:	N.D.
pH:	Not Relevant
Melting point / freezing point:	-119.2°F
Initial boiling point and boiling range:	132.8°F
Solid/gas flammability:	N.A. (Liquid)
Upper/lower flammability or explosive limits:	N.D.
Vapor density:	3,4 (air = 1)
Flash point:	-39.2°F
Evaporation rate:	N.D.
Vapour pressure:	98 hPa
Relative density:	0.986 g/cm ³
Solubility in water:	Insoluble
Solubility in oil:	N.D.
Auto-ignition temperature:	800.6°F
Decomposition temperature:	N.D.
Viscosity:	> 20,5 mm ² /s (40°C)
Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions

Chemical stability

Stable under normal conditions

Possibility of hazardous reactions

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth, alloys in powder or vapours) and powerful reducing agents.

It may generate toxic gases on contact with oxidising mineral acids, and powerful oxidising agents.

It may catch fire on contact with oxidising mineral acids, and powerful oxidising agents.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

a) acute toxicity:

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Test: LD50 - Route: Oral - Species: Rat > 2500 mg/kg
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg
Test: LC50 - Route: Inhalation Vapour - Species: Rat = 0.39 mg/kg - Duration: 4h

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin Yes

4-methylpentan-2-one - CAS: 108-10-1

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Mouse = 23.29 g/m³

Test: LD50 - Route: Oral - Species: Rat = 2080 mg/kg

Test: LD50 - Route: Skin - Species: Rat = 2000 g/kg

i) STOT-repeated exposure:

Test: NOAEL(C) - Route: Inhalation - Species: Rat > 250 mg/kg

ethyl acetate - CAS: 141-78-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat = 1600 mg/l

Test: LD50 - Route: Oral - Species: Rabbit = 4935 mg/kg

Test: LD50 - Route: Oral - Species: Rat = 11.3 g/kg

n-butyl acetate - CAS: 123-86-4

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 6400 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 21.1 mg/l - Duration: 4h

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 6193 mg/m³ - Source: OECD 403

Test: LD50 - Route: Oral - Species: Rat = 3492 mg/kg - Source: OECD 401

Test: LD50 - Route: Skin - Species: Rabbit > 3160 mg/kg - Source: OECD 402

tosyl isocyanate - CAS: 4083-64-1

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 2234 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 640 ppm - Duration: 1h

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

Local effects:

High vapour concentrations may cause irritation to respiratory system.

May cause slight skin irritation with prolonged or repeated contact.

May cause eye irritation.

Sensitization:

Considered as skin sensitizing.

n-butyl acetate - CAS: 123-86-4

Components of the product can be absorbed by the body by inhalation. Main symptoms: Dizziness, narcosis, Cough, nausea, vomiting, headache, unconsciousness, shortness of breath. Repeated exposure can cause skin dryness and cracking.

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

Inhalation: Vapor concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches and dizziness, are anesthetic and may cause other central nervous system effects. Contact with the skin: Low index of toxicity. Frequent or prolonged contact can dry the skin favoring the onset of dermatitis. Eye Contact: May cause slight eye discomfort with mild irritation, but does not damage eye tissue. Ingestion: even small quantities of liquid introduced into the respiratory system during ingestion or by vomiting, can cause bronchopneumonia or pulmonary edema. minimal index of toxicity.

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Substance(s) listed on the NTP report on Carcinogens:

None.

Substance(s) listed on the IARC Monographs:

4-methylpentan-2-one - Group 2B.

Substance(s) listed as OSHA Carcinogen(s):

None.

Substance(s) listed as NIOSH Carcinogen(s):

None.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 8.9 mg/l

Endpoint: LC50 - Species: Daphnia = 127 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 1000 mg/l

4-methylpentan-2-one - CAS: 108-10-1

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia > 200 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish > 179 mg/l - Duration h: 96

Endpoint: NOEC - Species: Daphnia = 30 mg/l

Endpoint: NOEC - Species: Algae > 146 mg/l

ethyl acetate - CAS: 141-78-6

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 230 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 165 mg/l - Duration h: 48

Endpoint: NOEC - Species: Algae > 100 mg/l - Duration h: 72

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia = 2.4 mg/l - Duration h: 504

c) Bacteria toxicity:

Endpoint: EC50 - Species: Bacteria = 5870 mg/l - Duration h: 0.25

n-butyl acetate - CAS: 123-86-4

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 44 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 648 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 18 mg/l - Duration h: 96

Naphtha - hydrocarbons C9 aromatics - CAS: 64742-95-6

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 3.2 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 2.9 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 9.2 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 1 mg/l - Duration h: 72 - Notes: NOELR

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

None

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13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force. DO NOT discharge into sewers, watercourses, ponds, canals or ditches. Empty product containers must be completely drained and stored safely until appropriately processes or disposed. Empty containers must be recycled, recovered or disposed of by a qualified and authorized company operating in compliance with current recycling, recovery and disposal regulations. It is advisable to provide the desposal company with all safety information of the material contained in the empty packaging. DO NOT pressurize, DO NOT cut, DO NOT weld, DO NOT puncture, DO NOT crush, DO NOT expose empty containers to heat, flames, sparks, electrostatic discharge or other sources of ignition.

14. TRANSPORT INFORMATION



UN number

ADR-UN Number: 1263
DOT number: UN1263
IATA-UN Number: 1263
IMDG-UN Number: 1263

UN proper shipping name

ADR-Shipping Name: PAINT
DOT-Shipping Name: Paint including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base or Paint related material including paint thinning, drying, removing, or reducing compound
IATA-Shipping Name: PAINT
IMDG-Shipping Name: PAINT

Transport hazard class(es)

ADR-Class: 3
DOT Hazard Class: 3
ADR-Label: 3
ADR - Hazard identification number: 33
IATA-Class: 3
IATA-Label: 3
IMDG-Class: 3
IMDG-Class: 3

Packing group

ADR-Packing Group: II
DOT Packing group: II
IATA-Packing group: II
IMDG-Packing group: II

Environmental hazards

ADR-Enviromental Pollutant: No
IMDG-Marine pollutant: No

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

N.A.

Special precautions

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DOT Special provisions: 149, 367, 383, B52, B131, IB2, T4, TP1, TP8, TP28
DOT Labels: 3
ADR-Subsidiary hazards: -
ADR-S.P.: 163 367 640C 650
ADR-Transport category (Tunnel restriction code): 2 (D/E)
IATA-Passenger Aircraft: 353
IATA-Subsidiary hazards: -
IATA-Cargo Aircraft: 364
IATA-S.P.: A3 A72 A192
IATA-ERG: 3L
IMDG-EmS: F-E , S-E
IMDG-Subsidiary hazards: -
IMDG-Stowage and handling: Category B
IMDG-Segregation: -

15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

List of substances included in the TSCA inventory: Hexamethylene-di-isocyanate (homopolymer), 4-methylpentan-2-one, ethyl acetate, n-butyl acetate, tosyl isocyanate.

List of substances not included in the TSCA inventory: Naphtha - hydrocarbons C9 aromatics.

TSCA listed substances:

Hexamethylene-di-isocyanate (homopolymer) is listed in TSCA Section 8b

4-methylpentan-2-one is listed in TSCA Section 8b, Section 8d HSDR

ethyl acetate is listed in TSCA Section 8b

n-butyl acetate is listed in TSCA Section 8b

tosyl isocyanate is listed in TSCA Section 8b.

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances: no substances listed.

Section 304 - Hazardous substances: 4-methylpentan-2-one, ethyl acetate, n-butyl acetate.

Section 313 - Toxic chemical list: 4-methylpentan-2-one.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA: 4-methylpentan-2-one - Reportable quantity: 5000 pounds

ethyl acetate - Reportable quantity: 5000 pounds

n-butyl acetate - Reportable quantity: 5000 pounds.

Reportable quantity for mixture: 1481.635133 pounds.

CAA - Clean Air Act

CAA listed substances:

4-methylpentan-2-one is listed in CAA Section 111, Section 112(b) - HAP, Section 112(b) - HON

ethyl acetate is listed in CAA Section 111

n-butyl acetate is listed in CAA Section 111.

CWA - Clean Water Act

CWA listed substances:

4-methylpentan-2-one is listed in CWA Section 304

ethyl acetate is listed in CWA Section 304

n-butyl acetate is listed in CWA Section 304, Section 311.

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

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4-methylpentan-2-one - Listed as carcinogen and reproductive toxicant.

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

4-methylpentan-2-one

ethyl acetate

n-butyl acetate.

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

4-methylpentan-2-one

ethyl acetate

n-butyl acetate.

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

4-methylpentan-2-one

ethyl acetate

n-butyl acetate.

16. OTHER INFORMATION

Full text of phrases referred to in Section 3:

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H317 May cause an allergic skin reaction.

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

H315 Causes skin irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This Safety Data Sheet cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer

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IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average