

SAFETY DATA SHEET

Levasil CS40-58

Version 2.2 Revision Date: 11/23/2022 US / Z8 Date of last issue: 01/14/2021
Date of first issue: 04/28/2015

SECTION 1. IDENTIFICATION

Product name : Levasil CS40-58

Manufacturer or supplier's details

Company name of supplier : Nouryon Pulp and Performance
Chemicals LLC

Address : 100 Matsonford Road, Building 1, Suite 500
Radnor PA 19087
US

Telephone : (770) 578-0858

Telefax : (770) 578-1359

E-mail address : psra.ppc@nouryon.com

Emergency telephone : US CHEMTREC +1-800-424-9300 Internat'l +1-703-741-5971
(collect calls accepted) CANADA CANUTEC +1-613-996-6666

Recommended use of the chemical and restrictions on use

Recommended use : Inorganic binder, surface modifier and flocculating agent.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Amorphous Silica, aqueous colloidal solution.

Components

| Chemical name | CAS-No. | Concentration (% w/w) |
|-------------------------|------------|-----------------------|
| silicon dioxide | 7631-86-9 | >= 30 - < 50 |
| Aluminum oxide hydrated | 24623-77-6 | >= 1 - < 5 |

Actual concentration is withheld as a trade secret

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

SECTION 4. FIRST AID MEASURES

- | | |
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| General advice | : No hazards which require special first aid measures. |
| If inhaled | : If breathed in, move person into fresh air. If symptoms persist, call a physician. |
| In case of skin contact | : Remove contaminated clothing and shoes. Rinse with water. |
| In case of eye contact | : Rinse with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. |
| If swallowed | : Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. |
| Most important symptoms and effects, both acute and delayed | : No information available. No information available. |
| Notes to physician | : Treat symptomatically. |

SECTION 5. FIRE-FIGHTING MEASURES

- | | |
|--|---|
| Suitable extinguishing media | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Specific hazards during fire fighting | : Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : No hazardous combustion products are known |
| Further information | : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for fire-fighters | : In the event of fire, wear self-contained breathing apparatus. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | |
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| Personal precautions, protective equipment and | : No conditions to be specially mentioned. Follow safe handling advice and personal protective |
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SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

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| emergency procedures | equipment recommendations. |
| Environmental precautions | : Try to prevent the material from entering drains or water courses. |
| Methods and materials for containment and cleaning up | : Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. |

SECTION 7. HANDLING AND STORAGE

| | |
|---|---|
| Advice on protection against fire and explosion | : Normal measures for preventive fire protection. |
| Advice on safe handling | : For personal protection see section 8. No special handling advice required. |
| Conditions for safe storage | : Keep container tightly closed in a dry and well-ventilated place. Keep away from direct sunlight. |
| Further information on storage conditions | : Do not freeze. May cause mild eye and skin irritation. Skin contact may cause dehydration. In case of spill or leak: Flush with water. Keep away from direct sunlight. Maximum storage duration 9 months |
| Materials to avoid | : No special restrictions on storage with other products. |
| Further information on storage stability | : No decomposition if stored and applied as directed. |
| Minimum storage temperature: | : Avoid temperatures below: 5 °C (41 °F) |
| Maximum storage temperature: | : 25 °C (77 °F) |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible | Basis |
|------------|---------|----------------------------------|----------------------------------|-------|
| | | | | |

SAFETY DATA SHEET

Levasil CS40-58

Version
2.2

Revision Date:
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US / Z8

Date of last issue: 01/14/2021
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| | | | concentration | |
|-----------------|-----------|------------|---|-----------|
| silicon dioxide | 7631-86-9 | TWA (Dust) | 20 Million particles per cubic foot (Silica) | OSHA Z-3 |
| | | TWA (Dust) | 80 mg/m ³ / %SiO ₂ (Silica) | OSHA Z-3 |
| | | TWA | 6 mg/m ³ (Silica) | NIOSH REL |

Engineering measures : Effective exhaust ventilation system

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Material : PVC

Material : Rubber gloves

Eye protection : Safety glasses

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : clear, opalescent

Odor : odorless

Odor Threshold : No data available

pH : 3 - 5

Melting point/range : 32 °F / 0 °C

Boiling point/boiling range : 212 °F / 100 °C

Flash point : Not applicable

Evaporation rate : No data available

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

| | |
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| Flammability (solid, gas) | : Not applicable |
| Flammability (liquids) | : The product is not flammable. |
| Self-ignition | : Not applicable |
| Upper explosion limit / Upper flammability limit | : Not applicable |
| Lower explosion limit / Lower flammability limit | : Not applicable |
| Vapor pressure | : ca. 23 hPa (68 °F / 20 °C) |
| Relative vapor density | : No data available |
| Relative density | : ca. 1.35 (68 °F / 20 °C) |
| Solubility(ies) | |
| Water solubility | : dispersible |
| Solubility in other solvents | : No data available |
| Partition coefficient: n-octanol/water | : Not applicable |
| Autoignition temperature | : Not applicable |
| Decomposition temperature | : No data available |
| Viscosity | |
| Viscosity, dynamic | : < 50 mPa.s (68 °F / 20 °C) |
| Viscosity, kinematic | : No data available |
| Explosive properties | : Not explosive |
| Oxidizing properties | : Not classified as oxidizing. |

SECTION 10. STABILITY AND REACTIVITY

| | |
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| Reactivity | : Stable under normal conditions. |
| Chemical stability | : Stable under recommended storage conditions. |
| Possibility of hazardous reactions | : No dangerous reaction known under conditions of normal use. |

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

| | | |
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| Conditions to avoid | : | Avoid allowing solution to dry as this can lead to a build-up of dust. |
| Incompatible materials | : | Copper Mild steel Aluminum |
| Hazardous decomposition products | : | No hazardous decomposition products are known. |
| Thermal decomposition | : | No data available |

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

| | | |
|---------------------------|---|---|
| Acute oral toxicity | : | LD50 (Rat): > 5,000 mg/kg Remarks: The value is estimated from tests on similar products. |
| Acute inhalation toxicity | : | Acute toxicity estimate: > 200 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method |
| Acute dermal toxicity | : | Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method |

Components:

silicon dioxide:

| | | |
|---------------------|---|----------------------------|
| Acute oral toxicity | : | LD50 (Rat): > 10,000 mg/kg |
|---------------------|---|----------------------------|

Aluminum oxide hydrated:

| | | |
|---------------------------|---|--|
| Acute oral toxicity | : | Acute toxicity estimate: 2,500 mg/kg Method: Expert judgment |
| Acute inhalation toxicity | : | Acute toxicity estimate: > 5 mg/l Test atmosphere: dust/mist Method: Expert judgment |
| Acute dermal toxicity | : | Acute toxicity estimate: 2,500 mg/kg Method: Expert judgment |

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

Skin corrosion/irritation

Not classified based on available information.

Components:

Aluminum oxide hydrated:

| | | |
|---------|---|----------------------|
| Result | : | Mild skin irritation |
| Remarks | : | Expert judgment |

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Aluminum oxide hydrated:

| | | |
|---------|---|---------------------|
| Result | : | Mild eye irritation |
| Remarks | : | Expert judgment |

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

| | | |
|---------|---|--|
| Method | : | (Magnusson-Kligman): |
| Result | : | Did not cause sensitization on laboratory animals. |
| Remarks | : | The value is estimated from tests on similar products. |

Germ cell mutagenicity

Not classified based on available information.

Product:

| | | |
|-----------------------|---|--|
| Genotoxicity in vitro | : | Test Type: Ames test Method: OECD Test Guideline 471 Result: negative Remarks: The value is estimated from tests on similar products. |
|-----------------------|---|--|

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : Information given is based on data on the ingredients and the toxicology of similar products.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

| | |
|---|---|
| Toxicity to fish | : LC50 (Danio rerio (zebra fish)): > 5,000 mg/l Exposure time: 96 h Remarks: The value is estimated from tests on similar products. |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Ceriodaphnia dubia (water flea)): 7,600 mg/l Exposure time: 48 h Remarks: The value is estimated from tests on similar products. |
| Toxicity to algae/aquatic plants | : NOEC (Selenastrum capricornutum (green algae)): 60 mg/l Exposure time: 48 h Remarks: The value is estimated from tests on similar products. |
| | EC50 (Selenastrum capricornutum (green algae)): 120 mg/l Exposure time: 48 h Remarks: The value is estimated from tests on similar products. |
| | EC10 (Selenastrum capricornutum (green algae)): 140 mg/l Exposure time: 48 h Remarks: The value is estimated from tests on similar products. |

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

products.

Persistence and degradability

Product:

| | | |
|---------------------------------|---|--|
| Biodegradability | : | Result: Not applicable Remarks: inorganic |
| Biochemical Oxygen Demand (BOD) | : | Remarks: No data available |

Bioaccumulative potential

Product:

| | | |
|-----------------|---|---|
| Bioaccumulation | : | Remarks: Bioaccumulation is not expected. |
|-----------------|---|---|

Mobility in soil

Product:

| | | |
|---|---|--|
| Mobility | : | Remarks: No test results Under extreme circumstances, transport from earth to water may take place. |
| Distribution among environmental compartments | : | Remarks: Transport to air is not expected. |

Other adverse effects

Product:

| | | |
|-----------------------------------|---|---|
| Ozone-Depletion Potential | : | Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). |
| Additional ecological information | : | None known. |

Components:

silicon dioxide:

| | | |
|-----------------------------------|---|-------------------|
| Additional ecological information | : | No data available |
|-----------------------------------|---|-------------------|

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | US / Z8 | Date of last issue: 01/14/2021 |
| 2.2 | 11/23/2022 | | Date of first issue: 04/28/2015 |

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Reportable Quantity : This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix A.

Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals subject to disclosure and listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Maine Chemicals of High Concern

This product does not contain any chemicals that are listed as Maine Chemicals of High Concern.

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

| | |
|-------|--|
| TCSI | : On the inventory, or in compliance with the inventory |
| TSCA | : All substances listed as active on the TSCA inventory |
| AIIC | : On the inventory, or in compliance with the inventory |
| DSL | : All components of this product are on the Canadian DSL |
| ENCS | : Not in compliance with the inventory |
| ISHL | : Not in compliance with the inventory |
| KECI | : On the inventory, or in compliance with the inventory |
| PICCS | : On the inventory, or in compliance with the inventory |
| IECSC | : On the inventory, or in compliance with the inventory |
| NZIoC | : On the inventory, or in compliance with the inventory |

SAFETY DATA SHEET

Levasil CS40-58

Version
2.2

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Date of last issue: 01/14/2021

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TSCA list

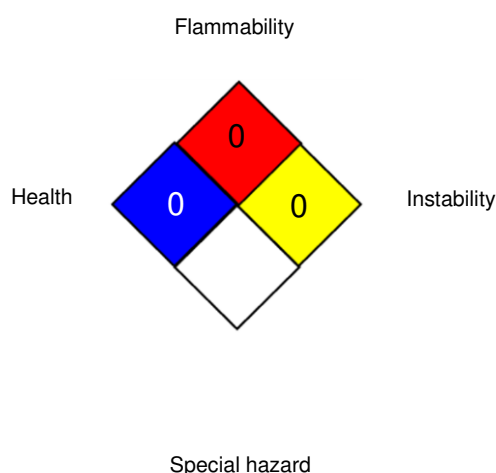
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

| | | |
|------------------------|---|----------|
| HEALTH | / | 0 |
| FLAMMABILITY | | 0 |
| PHYSICAL HAZARD | | 0 |

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

NIOSH REL : USA. NIOSH Recommended Exposure Limits
 OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
 NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
 OSHA Z-3 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally

SAFETY DATA SHEET

Levasil CS40-58

| | | | |
|----------------|------------------------------|---------|---|
| Version 2.2 | Revision Date: 11/23/2022 | US / Z8 | Date of last issue: 01/14/2021 Date of first issue: 04/28/2015 |
|----------------|------------------------------|---------|---|

Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Eka®, Expancel®, Kromasil®, Levasil® are trademarks of the company publishing this SDS.

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This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8