

SAFETY DATA SHEET

1. Identification

Product identifier Polyspec Hardener #3

Other means of identification
SKU# VE701H

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name ITW Engineered Polymers

Address 130 Commerce Drive
 Montgomeryville, PA 18936
 United States

Telephone Customer Service 215-855-8450

Website www.itwengineeredpolymers.com

E-mail orders.na@itwep.com

Contact person EHS Department

Emergency phone number CHEMTREC 800-424-9300
 International 703-527-3887

2. Hazard(s) identification

Physical hazards Organic peroxides Type F

Health hazards Acute toxicity, oral Category 4
 Acute toxicity, dermal Category 4
 Acute toxicity, inhalation Category 3
 Skin corrosion/irritation Category 1
 Serious eye damage/eye irritation Category 1
 Specific target organ toxicity, single exposure Category 3 respiratory tract irritation
 Specific target organ toxicity, repeated exposure Category 2

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 2
 Hazardous to the aquatic environment, long-term hazard Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Heating may cause a fire. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Toxic if inhaled. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep/Store away from clothing and other combustible materials. Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

| | |
|--|--|
| Response | If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Take off contaminated clothing and wash before reuse. Collect spillage. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store at temperatures not exceeding 25°C / 77°F. Keep cool. Store away from other materials. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | 7% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. 7% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. |

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|----------------------------|--------------------------|------------|----------|
| Cumene Hydroperoxide | | 80-15-9 | 60 - 100 |
| a,a-dimethylbenzyl Alcohol | | 617-94-7 | 5 - 10 |
| Cumene | | 98-82-8 | 5 - 10 |
| Acetophenone | | 98-86-2 | 1 - 5 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

| | |
|---|---|
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell. |
| Skin contact | Take off immediately all contaminated clothing. Rinse skin with water/shower. Chemical burns must be treated by a physician. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. |
| Most important symptoms/effects, acute and delayed | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Prolonged exposure may cause chronic effects. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |
| General information | If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. |

5. Fire-fighting measures

| | |
|--|---|
| Suitable extinguishing media | Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |

General fire hazards Heating may cause a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Keep away from heat, sparks and open flame. Keep away from clothing and other combustible materials. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Keep only in the original container. Store in a well-ventilated place. Store away from other materials.

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value |
|----------------------|------|---------------------------------|
| Cumene (CAS 98-82-8) | PEL | 245 mg/m ³ 50 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|----------------------------|------|--------|
| Acetophenone (CAS 98-86-2) | TWA | 10 ppm |
| Cumene (CAS 98-82-8) | TWA | 50 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|----------------------|------|---------------------------------|
| Cumene (CAS 98-82-8) | TWA | 245 mg/m ³ 50 ppm |

US. Workplace Environmental Exposure Level (WEEL) Guides

| Components | Type | Value |
|------------------------------------|------|--------------------------------|
| Acetophenone (CAS 98-86-2) | TWA | 50 mg/m ³ 10 ppm |
| Cumene Hydroperoxide (CAS 80-15-9) | TWA | 6 mg/m ³ |

US. Workplace Environmental Exposure Level (WEEL) Guides

| Components | Type | Value |
|--|--|-----------------------------------|
| | | 1 ppm |
| Biological limit values | No biological exposure limits noted for the ingredient(s). | |
| Exposure guidelines | | |
| US - California OELs: Skin designation | | |
| Cumene (CAS 98-82-8) | | Can be absorbed through the skin. |
| US - Minnesota Haz Subs: Skin designation applies | | |
| Cumene (CAS 98-82-8) | | Skin designation applies. |
| US - Tennessee OELs: Skin designation | | |
| Cumene (CAS 98-82-8) | | Can be absorbed through the skin. |
| US NIOSH Pocket Guide to Chemical Hazards: Skin designation | | |
| Cumene (CAS 98-82-8) | | Can be absorbed through the skin. |
| US WEEL Guides: Skin designation | | |
| Cumene Hydroperoxide (CAS 80-15-9) | | Can be absorbed through the skin. |
| US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) | | |
| Cumene (CAS 98-82-8) | | Can be absorbed through the skin. |
| Appropriate engineering controls | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. | |
| Individual protection measures, such as personal protective equipment | | |
| Eye/face protection | Chemical respirator with organic vapor cartridge and full facepiece. | |
| Skin protection | | |
| Hand protection | Wear appropriate chemical resistant gloves. | |
| Other | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. | |
| Respiratory protection | Chemical respirator with organic vapor cartridge and full facepiece. | |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. | |
| General hygiene considerations | When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. | |
| 9. Physical and chemical properties | | |
| Appearance | Liquid. | |
| Physical state | Liquid. | |
| Form | Liquid. | |
| Color | Blue. | |
| Odor | Aromatic | |
| Odor threshold | Not available. | |
| pH | Not available. | |
| Melting point/freezing point | Not available. | |
| Initial boiling point and boiling range | Not available. | |
| Flash point | 161.6 °F (72.0 °C) | |
| Evaporation rate | Not available. | |
| Flammability (solid, gas) | Not applicable. | |
| Upper/lower flammability or explosive limits | | |
| Flammability limit - lower (%) | Not available. | |
| Flammability limit - upper (%) | Not available. | |
| Explosive limit - lower (%) | Not available. | |
| Explosive limit - upper (%) | Not available. | |

| | |
|--|----------------------------|
| Vapor pressure | 13.9 @ 20 C |
| Vapor density | 5.4 |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Density | 1.05 |
| Explosive properties | Not explosive. |
| Flammability class | Combustible IIIA estimated |
| Oxidizing properties | Not oxidizing. |
| Specific gravity | 1.05 |

10. Stability and reactivity

| | |
|---|--|
| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Avoid heat, sparks, open flames and other ignition sources. Sunlight. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| Incompatible materials | Strong oxidizing agents. Combustible material. |
| Hazardous decomposition products | No hazardous decomposition products are known. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|--|
| Inhalation | Toxic if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. |
| Skin contact | Causes severe skin burns. Harmful in contact with skin. |
| Eye contact | Causes serious eye damage. |
| Ingestion | Causes digestive tract burns. Harmful if swallowed. |

| | |
|---|---|
| Symptoms related to the physical, chemical and toxicological characteristics | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. |
|---|---|

Information on toxicological effects

| | |
|--|---|
| Acute toxicity | Toxic if inhaled. Harmful in contact with skin. Harmful if swallowed. |
| Skin corrosion/irritation | Causes severe skin burns and eye damage. |
| Serious eye damage/eye irritation | Causes serious eye damage. |

Respiratory or skin sensitization

| | |
|----------------------------------|---|
| Respiratory sensitization | Not a respiratory sensitizer. |
| Skin sensitization | This product is not expected to cause skin sensitization. |

| | |
|-------------------------------|--|
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
|-------------------------------|--|

| | |
|------------------------|--|
| Carcinogenicity | Risk of cancer cannot be excluded with prolonged exposure. |
|------------------------|--|

IARC Monographs. Overall Evaluation of Carcinogenicity

Cumene (CAS 98-82-8) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Cumene (CAS 98-82-8)

Reasonably Anticipated to be a Human Carcinogen.

| | |
|---|---|
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. |
| Specific target organ toxicity - single exposure | May cause respiratory irritation. |
| Specific target organ toxicity - repeated exposure | May cause damage to organs through prolonged or repeated exposure. |
| Aspiration hazard | Not an aspiration hazard. |
| Chronic effects | May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. |

12. Ecological information

| | |
|--------------------------------------|--|
| Ecotoxicity | Toxic to aquatic life with long lasting effects. |
| Persistence and degradability | No data is available on the degradability of this product. |

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

| | |
|--------------|------|
| Acetophenone | 1.58 |
| Cumene | 3.66 |

| | |
|-------------------------|--------------------|
| Mobility in soil | No data available. |
|-------------------------|--------------------|

| | |
|------------------------------|---|
| Other adverse effects | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |
|------------------------------|---|

13. Disposal considerations

| | |
|--|--|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Local disposal regulations | Dispose in accordance with all applicable regulations. |
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

14. Transport information

| | |
|-------------------------------------|--|
| DOT | |
| UN number | UN3109 |
| UN proper shipping name | Organic peroxide type F, liquid (Cumene Hydroperoxide RQ = 12 LBS), MARINE POLLUTANT |
| Transport hazard class(es) | |
| Class | 5.2 |
| Subsidiary risk | 8 |
| Label(s) | 5.2 (8) |
| Packing group | II |
| Environmental hazards | |
| Marine pollutant | Yes |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | IP5 |
| Packaging exceptions | 152 |
| Packaging non bulk | 225 |
| Packaging bulk | 225 |
| IATA | |
| UN number | UN3109 |
| UN proper shipping name | Organic peroxide type F, liquid (Cumene Hydroperoxide) |
| Transport hazard class(es) | |
| Class | 5.2 |
| Subsidiary risk | 8 |

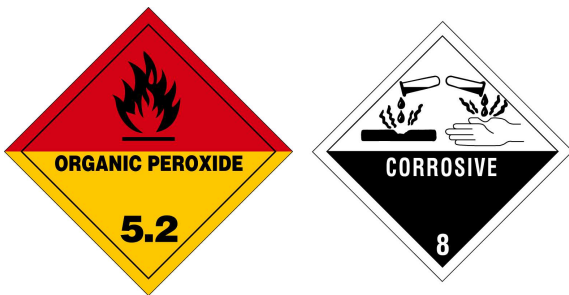
Packing group II
Environmental hazards No.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

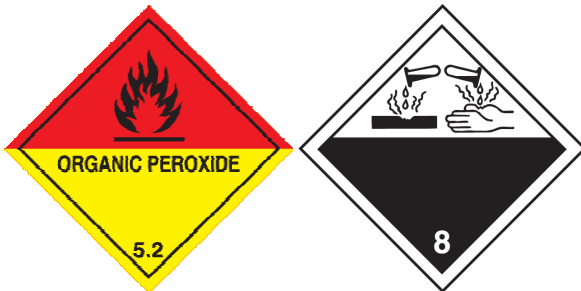
UN number UN3109
UN proper shipping name Organic peroxide type F, liquid (Cumene Hydroperoxide), MARINE POLLUTANT
Transport hazard class(es)
Class 5.2
Subsidiary risk 8
Packing group II
Environmental hazards
Marine pollutant Yes
EmS Not available.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT



IATA



IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

15. Regulatory information**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

| | |
|------------------------------------|---------|
| Acetophenone (CAS 98-86-2) | Listed. |
| Cumene (CAS 98-82-8) | Listed. |
| Cumene Hydroperoxide (CAS 80-15-9) | Listed. |

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

| | |
|------------------------------------|-------|
| Acetophenone (CAS 98-86-2) | % 1.0 |
| Cumene (CAS 98-82-8) | % 1.0 |
| Cumene Hydroperoxide (CAS 80-15-9) | % 1.0 |

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

| | |
|------------------------------------|---------|
| Acetophenone (CAS 98-86-2) | Listed. |
| Cumene (CAS 98-82-8) | Listed. |
| Cumene Hydroperoxide (CAS 80-15-9) | Listed. |

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - Yes

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

| Chemical name | CAS number | % by wt. |
|----------------------|------------|----------|
| Acetophenone | 98-86-2 | 1 - 2.5 |
| Cumene | 98-82-8 | 2.5 - 10 |
| Cumene Hydroperoxide | 80-15-9 | 80 - 90 |

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Acetophenone (CAS 98-86-2)
 Cumene (CAS 98-82-8)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

| | |
|----------------------|-----------------------|
| Cumene (CAS 98-82-8) | Listed: April 6, 2010 |
|----------------------|-----------------------|

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Acetophenone (CAS 98-86-2)
 Cumene (CAS 98-82-8)

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|----------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

| | |
|-----------------------------|--|
| Issue date | 09-25-2013 |
| Revision date | 10-31-2016 |
| Version # | 02 |
| HMIS® ratings | Health: 3* Flammability: 2 Physical hazard: 1 |
| NFPA ratings | Health: 3 Flammability: 2 Instability: 1 |
| Disclaimer | ITW Engineered Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. |
| Revision information | This document has undergone significant changes and should be reviewed in its entirety. |