PRECISION
REDI-MIX

Box 46
Rosa, Manitoba
R0A 1N0

ATTN: Director
Manitoba Sustainable Development
Environmental Approvals Branch
1007 Century Street
Winnipeg MB, R3H 0W4

Dear Director,

Precision Redi-Mix Inc is applying for a Class 1 development licence as stated in the Classes of Development Regulation M.R. 164/88 in The Environmental Act. The portable plant will be located near Rosa Manitoba at 17007 27E. Please find enclosed a copy of the Environmental Act Proposal Form and the required copies of the Environmental Assessment Report.

Sincerely,

Stacey Waldner
Vice President
Precision Redi-Mix Inc
204-396-5124
stacey@precisionredimix.com

PRECISION
REDI-MIX

Environment Act Proposal Form

Manitoba

Name of the development:
Precision Redi-Mix Inc Portable Concrete Batch Plant

Type of development per Classes of Development Regulation (Manitoba Regulation 164/88):
Class 1

Legal name of the applicant:
Precision Redi-Mix Inc

Mailing address of the applicant: PO Box 46 Rosa Manitoba, R0A 1N0

Contact Person: Stacey Waldner

City: Rosa Province: Manitoba Postal Code: R0A 1N0

Phone Number: (204) 396-5124 Fax: email: stacey@precisionredimix.com

Location of the development: 49.252524, -96.847581

Contact Person: Stacey Waldner

Street Address: 17007 27E SW 34-3-5E

Legal Description: SW34-3-5E

City/Town: Rosa Province: Manitoba Postal Code: R0A 1N0

Phone Number: (204) 396-5124 Fax: email: stacey@precisionredimix.com

Name of proponent contact person for purposes of the environmental assessment:
Stacey Waldner

Phone: (204) 396-5124
Fax:

Mailing address: PO Box 46
Rosa, Manitoba
R0A 1N0

Email address: stacey@precisionredimix.com

Webpage address:

Date: 2023-05-24

Signature of proponent, or corporate principal of corporate proponent:
Stacey Waldner [redacted] Vice President

Printed name:

PRINT RESET

March 2022 1

PRECISION
REDI-MIX

A complete **Environment Act Proposal (EAP)** consists of the following components:

- ☑ **Cover letter**
- ☑ **Environment Act Proposal Form**
- ☑ **Reports/plans supporting the EAP** (see "Information Bulletin - Environment Act Proposal Report Guidelines" for required information and number of copies)
- ☑ **Application fee** (Cheque, payable to Minister of Finance, for the appropriate fee)

Per Environment Act Fees Regulation (Manitoba Regulation 168/96):

Class 1 Developments	$1,000
Class 2 Developments	$7,500
Class 3 Developments:	
Transportation and Transmission Lines	$10,000
Water Developments	$60,000
Energy and Mining	$120,000

Submit the complete EAP to:
Director
Environmental Approvals Branch
Manitoba Environment, Climate and Parks
1007 Century Street
Winnipeg, Manitoba R3H 0W4

For more information:
Email: EABDirector@gov.mb.ca
Phone: (204) 945-8321
Fax: (204) 945-5229
https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html

Internal Use Only
$1,000.....C1 B-02
$7,500.....C2 B-02
$10,000.....TT B-02
$60,000.....WD B-02
$120,000.....EM B-02

Environmental Assessment Report

Portable Concrete Batch Plant

Executive Summary

Precision Redi-Mix Inc (2023) is requesting an environmental permit to operate a portable batch plant to be able to supply concrete to infrastructure projects in Manitoba. Precision Redi-Mix Inc will begin operation located at 17007 27E near Rosa Manitoba. Our focus at this time will be to provide concrete to the southeast of the province. As with all concrete plants, there are some minor environmental effects that may be present but are easily mitigated with the standards and guidelines that we adhere to.

1. Introduction and Background

Precision Redi-Mix Inc is a new company who is exciting to start this adventure and partnership with MDM Sand & Gravel. MDM Sand & Gravel has been operating a gravel pit since 2019 as well as placing gravel. Precision Redi-Mix Inc is pleased to have a managing partner that has been involved in the production of concrete for the last 25 years. The individual has been apart of Concrete Manitoba's standards during this time. He will be bringing his knowledge and high standard to our new company.

A portable concrete batch plant was purchased to manufacture concrete for the use of various infrastructure projects in the southeastern areas of Manitoba. The portable concrete batch plant that was purchased is a Bohringer B-120. The plant can produce 100 cubic meters per hour. The details of the plant are included in appendix A.

2. Facilities and Operation

Our concrete batch plant stores, weighs, and accurately scales off the cement, aggregate admixtures, and water by an automated state of the art batching software. Which then discharges the material into a concrete mixer truck. The Bohringer B-120 has three aggregate storage bins, which are scales as well. For cement storage the Bohringer comes with two silos, one for General Use powder(T-GU) and the other for flyash. We will be adding two more surge silos for added storage of cement products. All cement silos will be equipped with WAM dust collectors. The plant will be run by a diesel generator until we are hooked up to Manitoba Hydro Grid.

The operation will receive cement deliveries of a weekly basis along with delivery of admixture every few months. These deliveries will be brought in by semi trucks. With having our facility set up on MDM Sand & Gravel property, we are fortunate to eliminate the delivery of aggregate. The concrete will be delivered by concrete mixer trucks, which will be leaving the yard and return.

Precision Redi-Mix Inc will be set up at 17007 27E in the Municipality of Emerson/Franklin. Details of this property is included in appendix E. The property is owned by MDM Investments, which is a part of MDM Sand & Gravel.

3. Impacts and Mitigation

Precision Redi-Mix Inc anticipates there will be very minimal environmental, public health, and socioeconomic impacts due to the mobilization and operation of our plant. The minor effects or potential hazards that may be encountered include, air-borne dust, noise, green house gas emissions, the storage of fuel and admixtures, the use of water, release of water and concrete washout, and the flow of truck traffic around the plant.

Precision Redi-Mix Inc will operate the plant and associated jobsites within the guidelines and regulations set out by the Manitoba Environmental Act, Workplace Health and Safety Act, and any other applicable federal, provincial, or local standards or requirements relevant to the location of the plant operation. We will also become a member of Concrete Manitoba and follow their requirements and guidelines. We will also go through an audit which will be conducted by an audit through Concrete Manitoba. The detail of the audit is included in appendix F.

The following are some of the possible impacts of operating the plant, and the measures that will be taken to reduce their impact and/or eliminate them completely.

4. Dust

The manufacturing of concrete involves the handling of aggregate and Portland cement powder and can result in airborne dust. Similarly, traffic onsite may result in airborne dust in dry conditions.

Dust from the plant will be controlled using WAM silotop filters on the cement storage silos, designed specifically for the fine dust particles in the cement products. Details of the

filters are included in appendix A. Dust from the deposit of the material into the mixer trucks are minimized by a sock designed to eliminate blowing dust. Dust from moving of traffic around the site will be controlled by spraying the yard down by water as required.

5. Noise

While the plant is in operation there will be noise on site from the moving components of the plant, engines running, and heavy equipment moving around the site.

With the facility being set up in a non-residential area, and with the nearest neighbour being over 1km away, concerns of noise complaints are expected to be non-existing.

6. Pollution and By-Product

The operation and maintenance of the plant and truck will be producing some waste.

All metal components replace or removed from the plant will be taken for recycling. General waste such as grease tubes, tires, belting, miscellaneous packaging, and trash will be minimal, but stored in garbage bins and taken to an approved landfill. There is no hazardous waste associated with a concrete batch plant.

7. Greenhouse Gases

In the interim until we are connected to Manitoba Hydro Grid, Precision Redi-mix Inc will be operating a diesel generator. The diesel generator will release greenhouse gases while in operation. Concrete trucks, staff vehicles, and maintenance vehicles operate on diesel or gasoline fuel.

The plant that we purchased is a new and efficient plant. We will preform regular scheduled maintenance and only operate the plant within the recommended operating conditions to best reduce the potential of the plant burning excess fuel. During the operation the idle time for concrete mixer trucks and staff vehicles will be kept to a minimum and all vehicles will be properly maintained.

8. Fuel Storage

Diesel fuel storage onsite will be under 500L (1 unit). This unit will be used for fueling loader and generator. Storage of liquids involved will be properly maintained.

Fuel leaks will be avoided with the use of approved storage tanks and storing the smallest amount of fuel. Spill kits will be kept onsite consistent with Manitoba laws, emergency numbers will be posted onsite, proper authorities will be alerted in the event of a spill, and the waste will be properly cleaned and disposed of.

9. Admixture Storage

Concrete admixtures such as GCP's Daravair 1400, Zyla 630, Adva 140m and daraccel, will be stored onsite. The storage of these products has a risk of spill.

Admixtures will be stored in polyethylene tanks, which will be stored in approved storage container. Like fuel, the same spill precautions and procedures will be followed.

10. Water Drawing

Concrete batching requires water as one of the components. A water source will be required to operate the plant. Heavy use of water can involve drawdown on the wells in the vicinity of the plant or have a negative effect on fish habitats.

To mitigate this, we will be restricting water flow to 10-15gpm (gallons per minute). We will have a water storage tank in place to store 70,000L. This will give us an opportunity to ensure we are not drawdown on wells in the area. But also allowing Precision to produce large volumes drawing water from our holding tank. The water used to produce concrete must pass the Concrete Manitoba standard.

11. Water Release and Concrete Washout

The release of water and concrete from washing out and cleaning trucks may result in concrete and water with high pH levels.

The discharge of water from the mixer truck after it has been washed will be discharged into a 2-cell holding pit. Once the water reaches a level, it will flow into the second cell through a weir. The water in the second weir will evaporate or be recycled. As well, the pH level in the second cell will have reduced from sediment from the first cell to the second cell. The water can also be used for dust suppression. As well the water can be released into the vegetation if it meets the pH standards.

Leftover concrete will be recycled into concrete blocks and windrowed in its plastic state. Once the concrete has cured, it will be stock piled and crushed at our pit. Then the crushed concrete will be recycled for fill into roads and developments.

12. Monitoring

Precision Redi-Mix Inc plans to regularly review and document environmental checklists, along with daily job hazard analysis to ensure that known items of potential harm are being monitored. Discovery of any other items that arise that may cause harm to the health of the public or environment can be addressed if they arise.

13. Conclusion

In general, the effects of our portable concrete batch plant are extremely minimal. By following the applicable policies and procedures, as well as the items outlined in this document, no environmental issues will arise from operation of the concrete plant.

Precision Redi-Mix Inc is passionate about the communities it serves. We endeavor to operate a concrete plant that can provide quality infrastructure that has a net positive impact on the environment and the health of the residents in the operating location.

APPENDIX A
BATCH PLANT

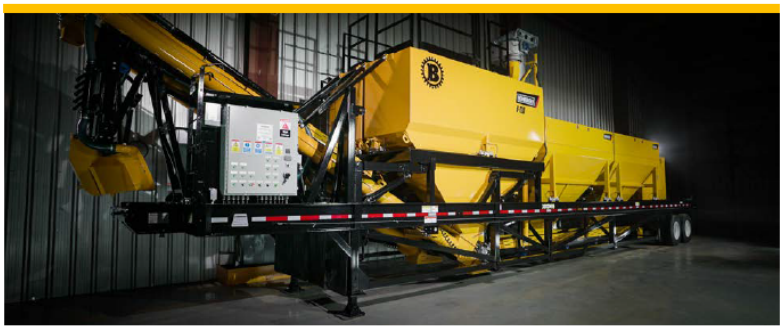
PRECISION
REDI-MIX

BÖHRINGER
BREAKING BOUNDARIES SINCE 1948

B-120 Concrete Batch Plant

BÖHRINGER

B-120 Concrete Batch Plant



The 6th generation B-120 concrete batch plant is designed and built to Böhringer's exacting standards, delivering first in class versatility and performance – with achievable batching times of 2-3 minutes per cycle*.

This high-performance workhorse, offers a condensed footprint, meant to be fed by a front-end loader, without the need for extensive staging or concrete foundations. Quick setup times ensure that your B-120 gets straight to work with no hassle.

** Theoretically 91m3/hr = 120 cubic yards.*

B-120

Key Features	
No Permits Required	Applicable to most jurisdictions when running a generator
Fast Setup	Simple sophistication makes the B-120 the industry leader for one person setup and operation
Mobility	Easy to transport – reducing downtime between jobs and getting your concrete batches right to where they need to be
Clam Gates	Ensures prompt and accurate discharge of aggregates
Augers	Clean discharge of material, minimizing unwanted dust
3rd Aggregate Bin w/ Conveyor	Allows for additional onboard storage and enhanced finished product
Böhringer Automation	Produces consistent high-quality batches at record speeds. Cloud accessible operation allows for direct integration with leading accounting software and batch ticket backups
Onboard Compressor	Allows for efficient operation of all functions without increasing your footprint
Water Meter	Fast and accurate discharge of water reduces batching time and saves you money
Air Compressor w/ Auxiliary Hookup	No extra compressor needed to run auxiliary equipment or tools
Finger Guards and Ladder Cages	MSHA and OSHA compliant safety guarding – protecting your personnel and maximizing job site safety
Hydraulic Setup	No cranes required!
Gauges	Establish settings, monitor cement fluidizers, dust collectors, water valves and main air supply
Dust Collector w/ 3 Foot Square Personnel Hatch	Allows for easy access to the silos, for inspection and maintenance

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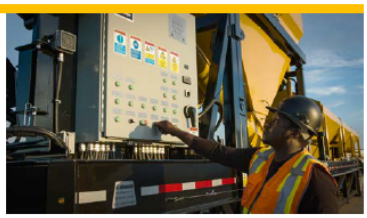
REDI-MIX

BÖHRINGER

B-120 Concrete Batch Plant



B-120

Key Features	
No Permits Required	Applicable to most jurisdictions when running a generator
Fast Setup	Simple sophistication makes the B-120 the industry leader for one person setup and operation
Mobility	East to transport – reducing downtime between jobs and getting your concrete batches right to where they need to be.
Clam Gates	Ensures prompt and accurate discharge of aggregates
Augers	Clean discharge of material, minimizing unwanted dust
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Hydraulic Setup	No cranes required!
Gauges	Establish settings, monitor cement fluidizers, dust collectors, water valves and main air supply
Dust Collector w/ 3 Foot Square Personnel Hatch	Allows for easy access to the silos, for inspection and maintenance

APPENDIX B
WAM DUST COLLECTOR

DUST FILTRATION DUST FILTRATION

Silo Venting Filters

SILOTOP® zero

HIGH PERFORMANCE
FEW COMPONENTS

WAMGROUP

WAM

PRECISION
REDI-MIX

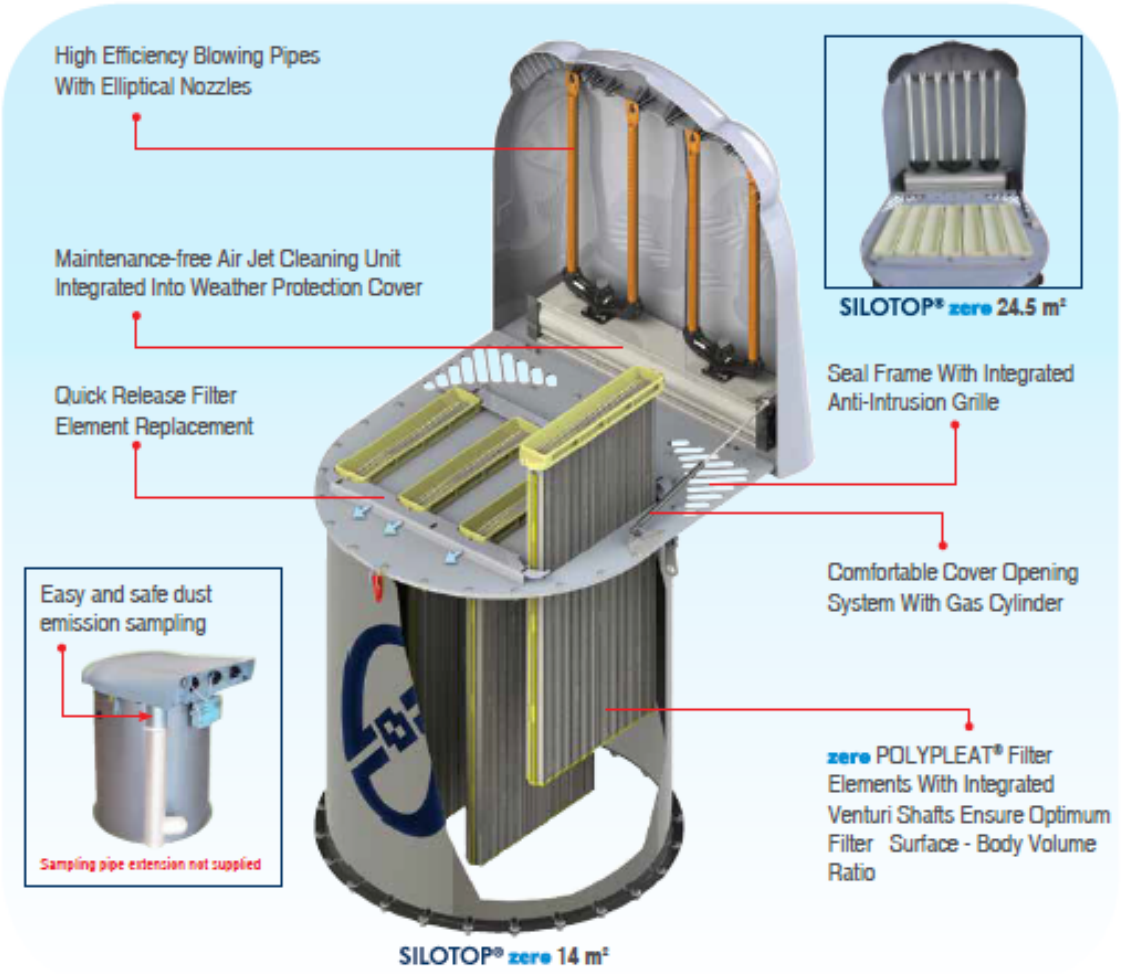
Silo Venting Filters
SILOTOP® zero

CUTTING-EDGE DUST FILTRATION TECHNOLOGY

SILOTOP® zero is a cylindrically shaped dust collector for venting pneumatically filled silos. Its stainless steel body contains vertically mounted POLYPLEAT® filter elements. The air jet cleaning system is integrated into the hinged weather protection cover.

Dust separated from the air flow by special filter elements drops back into the silo after an integrated automatic pulse-jet air cleaning system has removed it from the filter media.

Air filtration capacity has been increased through new high performance filter media, which require less filter surface area. This results in a lower pressure drop and dust emissions of less than 1mg/Nm³.



Overall Dimensions

CODE	BODY Ø mm [in]	FILTER SURFACE m² [sq ft]	MAX. HEIGHT WHEN CLOSED mm [in]	MAX. HEIGHT WHEN OPEN mm [in]	WEIGHT kg [lb]
SILAB 14	800 [31.5]	14.0 [150]	1,100 [43.3]	1,850 [72.8]	68 [150]
SILAB 24	800 [31.5]	24.5 [264]	1,100 [43.3]	1,850 [72.8]	79 [174]

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Features

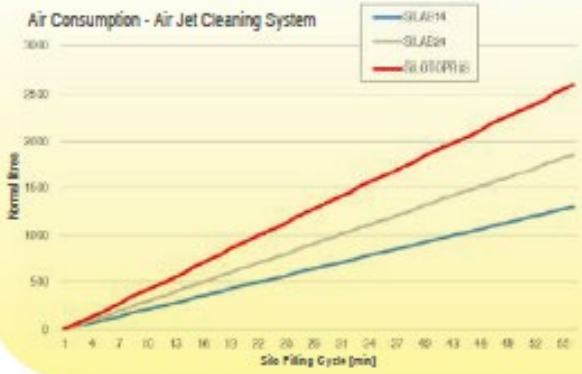
- Dust emission < 1 mg/Nm³ due to **filter media certified EN ISO 16890-1:2016, Group ISO ePM2.5 65%**
- Air flow **performance increased** by 30%
- **Compact** 800 mm (30 in) diameter stainless steel body with bottom flange
- **Maintenance-free** air jet cleaning unit integrated into weather protection cover
- Maintenance height = 1,100 mm (3.6 ft)
- **Extended durability** due to **zero** filter media POLYPLEAT® elements
- **Safe** weather protection cover with **lockable quick release**

Easy and Safe Maintenance

Benefits

- **Perfectly accessible due to compact design**
- **Rugged construction**
- **Lightweight POLYPLEAT® filter elements easily replaceable by one operator only**
- **Eco-friendly zero filter media**

Economic Savings Using zero Filter Media



- **Up to 50% lower annual management costs due to lower air consumption**
- **Up to 30% savings in spare parts**
- **Up to 20% savings in silo filling time (in standard test conditions)**

Accessories

- Weld-on bottom ring
- Multifunctional electronic differential pressure meter
- Winter protection for solenoid valves
- Emission sampling kit

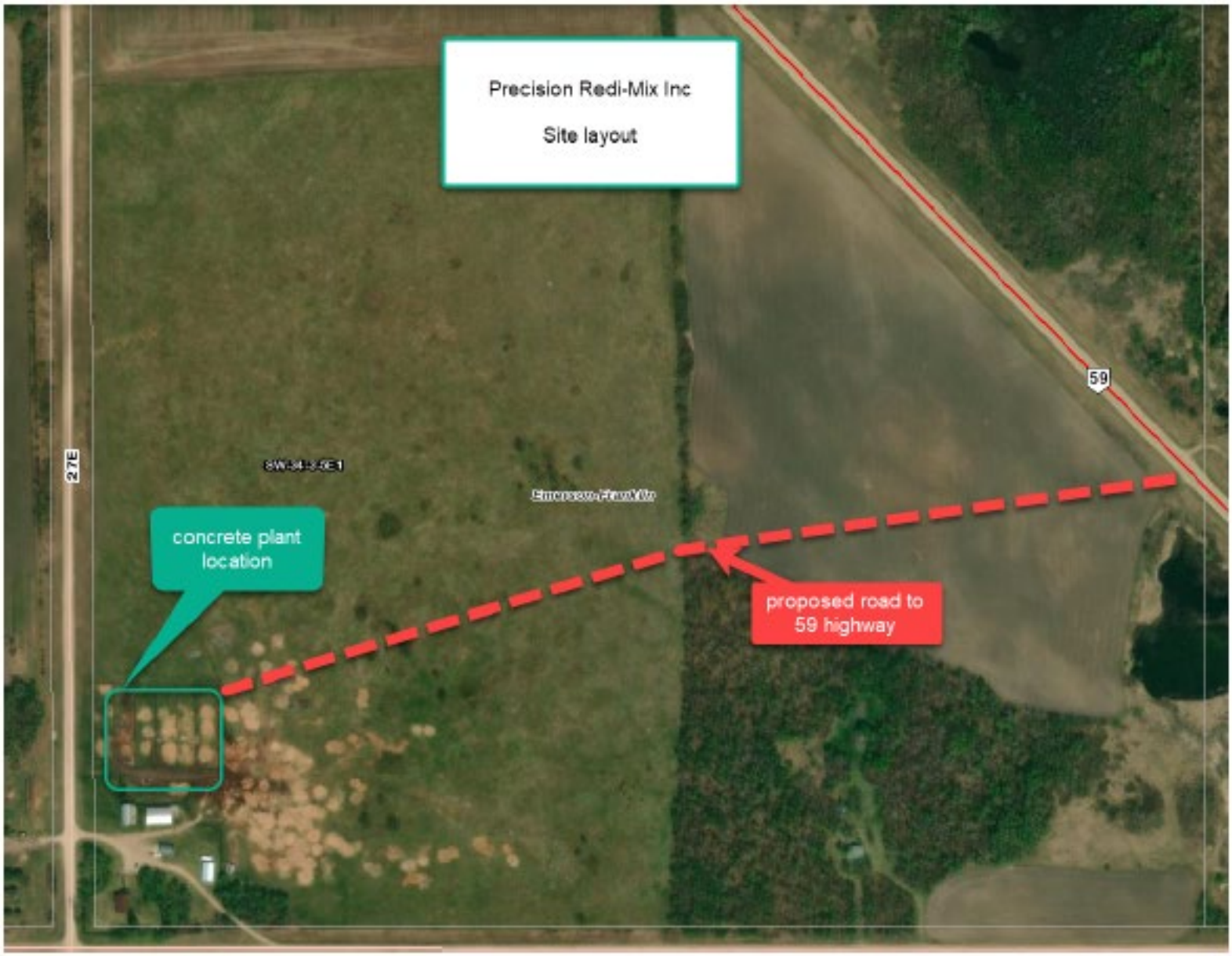
Application

WAM · MAP · OLI · SPECO · TOREX · EXTRAC · RONCUZZI
FLITECH · SEPCOM · TECNO CM · SILOFAB · BAVI · VISAM · Enviro-Care

WAM

www.wamgroup.com

APPENDIX C
SITE LAYOUT


Precision Redi-Mix Inc
Site layout
27E
59
concrete plant location
proposed road to 59 highway

APPENDIX D
CONCRETE MB GUIDELINES

Manitoba Ready Mix Concrete Association

www.mrmca.com

Ready Mix Concrete Production Facilities Audit Check List

(Approved February 04, 2011)

_____ Company	
_____	Contact
_____ Phone Fax Email	
_____ Address	Mailing
_____ Location	Plant
_____	Auditor
_____ Date	Audit
_____ Expiry Date	

MANITOBA READY MIX CONCRETE ASSOCIATION

Table of Contents

Foreword

MRMCA Certification Policies

The Manitoba Ready Mix Concrete Association (MRMCA), the representative organization of ready mix concrete producers in Manitoba, provides industry representation for the advancement of quality concrete in the province of Manitoba while striving towards the following goals:

- Market and promote the use of quality concrete
- Provide a consolidated industry approach to regulatory bodies
- Provide networking opportunities
- Provide education and training
- Promote best environmental and safety management practises

As a member of the Canadian Ready Mix Concrete Association, the MRMCA performs several important functions for its members, one being the certification of production plants. This Audit Check List outlines technical information about ready mix concrete plant facilities to assist producer members in building and maintaining plant equipment to the highest possible level of efficiency and safety.

In order for MRMCA producer members to provide assurance to their customers that a given production plant does have the capability of producing quality concrete by virtue of good equipment in proper operating condition, the MRMCA issues a Certificate of Conformance following a detailed audit of the plant's equipment as outlined in this Guide.

This publication sets out the detailed requirements for plant certification. This plant certification program does not address or document the quality of the concrete produced by a member company's plant. It provides an MRMCA member company with the means of obtaining a Certificate indicating that a plant, because of the nature and condition of its equipment, has the proper capability of producing quality concrete.

Certification is mandatory for all Producer Members of the MRMCA. For a company to be a Producer Member of the MRMCA, all of its concrete plants and equipment must conform to this guideline and have a current Certificate of Conformance as issued by the MRMCA. To be eligible for a Certificate of Conformance, the plant must be inspected by, or have the inspection supervised by, a professional engineer registered to practice within the Province of Manitoba and approved by the MRMCA, for conformance with the Check List requirements contained herein.

The cost for a certification application is based on a flat fee as determined by the Association and may change without notice at the beginning of a new calendar year. The flat fee comprises all administrative costs and plant audit. This fee is fixed and does not change regardless of location of the applicant within the province of Manitoba. However if the initial plant inspection visit reveals deficiencies, the producer member shall have the opportunity to provide documented proof that the deficiencies have been corrected to avoid a second visit. Until proof is submitted, certification is withheld. If a second visit is required, then mileage will be assessed at $0.52/km plus all other expenses and the rate of $75/hour will be assessed. All deficiencies are to be completed in 30 days from the initial visit.

In addition to carrying the signature and seal of the MRMCA`s inspecting engineer, the Certificate must be signed by the principal company executive attesting to his/her intention of seeing that all equipment is maintained within the requirements of the Check List.

It should be noted in this connection that the inspecting engineer, in signing the Certificate, stakes his professional reputation on the evaluation having been objective and thorough. In addition, the engineer accepts his/her ethical and legal responsibilities not to disclose any information concerning the lawful business affairs or technical processes of Members.

At any time, the MRMCA reserves the right to perform a spot inspection to compare plant attributes with the most recent inspection Check List to satisfy itself that the Certificate provides a valid evidence of productive capability. The same prerogative exists with regard to the company's official pledge to maintain the equipment properly.

Currently Certification applications must be received at the Association on or before May 31st of each year. The Certification Committee will review these applications by mid June and make recommendations on each application to the Board of Directors.

The MRMCA allows for expedited Plant Certification upon request by the applicant company. The expedited process will take 2 weeks from receipt of a properly completed certification application**.** A non-refundable fee set by the Board of Directors must accompany the application for the expedited plant certification process. The non-refundable fee does not guarantee that the applicant's certification will be granted, but only that the application will be reviewed on a timely basis to determine its merits. Copies of this booklet are available without charge from the MRMCA or may be downloaded in PDF format from www.mrmca.com.

DISCLAIMER

The *Plant Certification Audit and Checklist* is intended to be used by the Manitoba Ready Mix Concrete Association (MRMCA) for the purpose of an on-site audit by a professional engineer prior to issuance of the Certificate.

Neither the MRMCA, its employees, board members or agents have made or hereby purport to make any representations, warranties, or covenants with respect to the specifications or information contained in this Check List or the results generated by their use, nor will they be liable for any damage, loss or claims, including those of an incidental or consequential nature, arising out of these protocols.

These protocols are not in any way intended to supersede or detract from any requirements contained in municipal, provincial or federal laws, regulations or legislation.

APPROVED QUALITY PROGRAM

The Manitoba Ready Mix Concrete Association (MRMCA) assists the provincial concrete industry by providing a Plant Certification program designed to assure owners and others that each Certified Production facility meets industry standards. Plant Certification is a mandatory requirement of all MRMCA producer member companies.

Each production facility is audited by a qualified professional engineer in order to ensure that the plant, equipment, material handling and delivery/mixer trucks have met the minimum prescribed qualifications and that the proper capability of producing quality concrete exists as per current edition of Canadian Standards Association (CSA) A23.1– Concrete Materials and Methods of Concrete Construction.

AUDIT and CHECK LIST

MRMCA offers this "Audit and Check List" prepared under the direction of the Association's Technical Committee.

Under the Terms and Conditions of this Certification, all concrete production facilities of the producer member must at all times qualify for and hold a *Certificate of Ready Mix / Mobile Mix Concrete Production Facilities*. It is also a condition that the producer member allows MRMCA to conduct audits of the plant by an MRMCA appointed auditor at any time.

The *"Certificate of Concrete Production Facilities"* (hereafter referred to as the *"Certificate"*) is widely recognized by municipal, provincial and private specifying agencies. It is extensively used as

a basis of concrete supplier pre-qualification as the supplier has demonstrated the ability to produce concrete in a manner consistent with this *Audit and Check List*.

INSTRUCTIONS for AUDIT and CHECK LIST

1 GENERAL

This section provides guidance to ready mixed concrete producers in qualifying their plants for the *Audit and Check List*. It is also intended to assist the examining Auditor in performing the plant inspection accurately. The Producer's plant staff should assist the Auditor to expedite the inspections and to correct any deficiencies in plant installations or operations. The plant must be operating in order to complete the Audit.

In order to apply for or retain the plant certification, a ready mixed concrete producer will be supplied with a copy of this *Audit and Check List* for each plant to be inspected. The completed original document will be retained on file at the administrator's (MRMCA) office.

A qualified registered Professional Engineer in the Province of Manitoba, here after known as "The Auditor", appointed by MRMCA will inspect, or supervise the inspection of, all facilities covered by the *Audit and Check List* and attach his/her seal to the completed form.

A *Certificate* will be issued by the administrator (MRMCA) upon receipt of a properly executed *Audit and Check List* indication that the Audit requirements have been accepted, provided that all other conditions of certification have been met.

The *Audit and Check List* itemizes requirements for plant facilities and equipment used in the production of ready mix concrete. Each item is to be checked by the Auditor, meeting the requirements listed above who will in each case enter the appropriate symbol in the space provided as follows:

a. **"P"** - If the requirement passes
b. **"F"** - if the requirement fails
c. **"NA"** - If the requirement is not applicable to the type of plant being inspected

The Auditor will examine every item on the *Audit and Check List* for conformance and indicate the appropriate symbol in the space provided. A Certificate cannot be issued to a plant that does not meet all applicable items in the *Audit and Check List*.

Once the Auditor has completed the *Audit and Check List*, he/she must initial the bottom right corner of every page of the booklet to confirm that all applicable sections have been reviewed and that the information is correct.

To validate the Owner's Conformance Agreement, the producer company executive must sign the agreement, attesting that he/she will maintain the facilities in compliance with the Audit requirements at all times. MRMCA also retains the right to conduct random inspections of concrete production facilities and to conduct inspections of specific facilities in response to complaints received. Failure to allow for these inspections to take place shall result in a loss of the concrete producer's *Certificate and membership*.

2 PORTABLE PLANTS

Procedures for evaluation of portable plants shall follow the same criteria as permanent plants, with emphasis on:

Clause 1.2.1 Aggregates storage arranged to assure that each aggregate as removed is clean, distinct and not intermingled with others.
Clause 2.0 Plant scales shall be calibrated in accordance with CSA A23.1. A valid scale test report must be submitted to the Auditor prior to the issuance of the Certificate of Certification. The scales shall be rechecked whenever the plant is moved to a new location or whenever alterations or additions are made to the plant that might affect the weighing accuracy of the scales.
Clause 4.2 (if applicable) The truck fleet intended for use with the portable plant shall be inspected and listed by number or designation in "Summary of Fleet Condition" as Pass or Fail with explanation.

The Certificate shall be valid for a period of three (3) years. However, the certification is site specific. Should the portable plant be relocated, the certificate is voided and recertification is required. It is imperative that upon application for certification using this *Audit and Check List*, the batch plant site be clearly stated by street address, lot number, or rural Section-Township-Range.

The Association shall apply a surcharge for the timely inspection of portable plants over and above the standard application fee as deemed reasonable to the situation.

3 TERMS and CONDITIONS

1. Conformance Agreements: Conformance with the requirements of the *Audit and Check List* must be assured. The completion of the Auditor's Conformance Agreement, validated by the signature and seal of the inspecting Auditor and the completion of the Owner's Conformance Agreement validated by the signature of the signing authority of the Owner will make the plant eligible for a "*Certificate*".

2. All producing plants belonging to the Producer Member shall be certified.

3. Certification:

a. The successfully completed Audit shall be valid for a period of three (3) years and shall expire on December 31st of the third year

b. The Certificate becomes invalid upon ownership change of the plant

c. The Certificate may be revoked at the sole discretion of MRMCA for non-compliance

d. All current documentation shall be available for inspection.

Non-conformance with these requirements can result in loss of Certification of the concrete production facility. Re-application is subject to the terms and conditions of the MRMCA plant certification requirements.

REFERENCES (Reference is made only to items not considered self-explanatory):

1. CSA-A23.1 *Concrete Materials and Methods of Concrete Construction (2009)* and CSA-A23.2 *Methods of Test for Concrete* (current) published in one volume by the Canadian Standards Association
2. Concrete Plant Standards (Metric), Twelfth Revision, November 2000. Concrete Plant Manufacturers Bureau, 900 Spring Street, Silver Spring, Maryland 20910, USA
3. Truck Mixer, Agitator and Front Discharge Standards, TMMB-100-05, 2005 Printing. Truck Mixer Manufacturers Bureau, 900 Spring Street, Silver Spring, Maryland 20910, USA
4. *Certification of Ready Mixed Concrete Production Facilities*; January 2006; National Ready Mixed Concrete Association, 900 Spring Street, Silver Spring, Maryland, USA 20910

CHECK LIST FOR READY MIX CONCRETE PRODUCTION FACILITIES

1.0 RAW MATERIALS

1.1 Cementitious Materials

.1 Bins or silos are tight and with free movement to discharge opening [ ]

.2 Separate storage is provided for different types of cementing materials to prevent contamination – common bag houses should shake down into the least affected cementing material [ ] .3 Intra-plant handling prevents contamination [ ]

.4 All cementitious feed pipes are marked and designated (e.g. GU, HS, Fly Ash, etc)[ ]

1.2 Aggregates

.1 Aggregates stockpiles are arranged to assure that each aggregate as removed is clean, distinct and not intermingled with others

.2 Procedures for unloading and storing aggregates prevents harmful segregation [ ]

.3 Intra-plant handling and transportation prevents harmful segregation [ ]

.4 Separate storage bins or compartments for each size and type of aggregate are properly constructed and charged to prevent mixing of different sizes and types [ ]

1.3 Water

.1 Adequate supply with pressures sufficiently constant or regulated to prevent interference with accuracy of measurement where flow meters are used to measure mixing water – the flow meter shall be calibrated and documented at intervals of no more than six months [ ]

.2 The concrete producer must provide certification that the water used meets the requirements of CSA A23.1 at all times. Water for concrete production may be from one of the following sources:

Potable source (water is supplied by a government/commercial agency) [ ]

Non-potable source (satisfactory history of strength and durability made with the water has been demonstrated) [ ]

Water from concrete production operations [ ]

1.4 Admixtures

.1 Storage of liquid admixtures is provided to prevent damage by freezing or contamination [ ]

.2 Agitation is provided for liquid admixtures that are not stable solutions [ ]

.3 Each admixture shall be measured and discharged separately [ ]

1.5 Materials for Winter Production

.1 For winter concrete production, plant heating facilities for water and/or aggregates are provided to ensure that concrete temperatures conform to CSA A23.1 [ ]

2.0 Scales

The Auditor will only accept mechanical inspection and calibrations as performed by a qualified technician employed by an authorized Scale Manufacturer or Scale Company. The Scale Manufacturer or Scale Company has the responsibility to ensure the mechanics are in good working order as per industry standards and calibration tolerances are met for each scale. Acceptance will be based on the MRMCA Scale Check Data Form (Appendix A), completed and signed by a technician of the Scale manufacturer or Scale Company.

Scales must be checked and calibrated in accordance with CSA A23.1, or whenever alterations are made to the Plant that may affect the weighing accuracy of the scales or whenever the plant is moved.

General Information

a. Each scale is comprised of a suitable system of lever and/or load cells, which will weigh consistently within the tolerance specified in the MRMCA Scale Check Data Form (Appendix A), with loads indicated either by a beam with a balance indicator or a full reading dial or digital readout display verifying accuracy.

b. Each scale must be calibrated at a minimum of 2 points and at 20% and 80% of the scales normal operating capacity.

c. The Scale Manufacturer or Scale Company must supply the necessary documentation that government approved test weights are used, which are certified and traceable.

d. The Scale Manufacturer or Scale Company must provide a procedure or check list which is used for the inspection and to document all mechanical checks, calibration test results and any deficiencies in the scale or weighing system.

e. The Scale Manufacturer or Scale Company's qualified technician must sign the MRMCA Scale Check Data Form certifying that all requirements have been met.

f. All scale check and calibration reports/records must be kept on site and must be available for inspection at all times.

The MRMCA Scale Check Data Form is signed and certified by a qualified technician employed by a Scale Manufacturer or Scale Company. [ ]

3.0 BATCHING EQUIPMENT

3.1 General

The plant is described as follows:

A. Permanent [ ] B. Portable+ ID#_____ [ ]

3.2 Batching Method

→ BatchTruck Mixer [ ]

→ → →

→ BatchStationary MixerTruck → Mixer [ ]

→ BatchStationary → MixerAgitating Unit [ ]

BatchStationary MixerNon-Agitating Unit [ ]

Portable Cement Silo [ ]

3.3 Requirements

.1 Batchers for weighing materials consist of suitable containers freely suspended from a scale system and equipped with the necessary charging and discharging mechanisms. Batchers shall be inspected to ensure they are freely suspended before and after loading. [ ]

.2 Cementing materials are weighed on a scale and in a hopper separately from other ingredients. Portland cement shall be batched prior to the batching of any supplementary materials. [ ]

.3 Batchers are capable of receiving rated load without contact of the weighed material with the charging mechanism. [ ]

.4 Cement material batchers are equipped with dust seals between charging mechanism and hopper, installed in such a way that weighing accuracy will not be affected; cementing materials weigh hopper vented to permit air escape; hopper is free from build-up and self-cleaning to ensure complete discharge. [ ]

.5 Batcher charging mechanism is designed, operated and maintained to stop flow of material within the weighing tolerances specified in Section 3.4 and prevents loss of material when closed. [ ]

.6 Vibrators and other appurtenances are installed and operated so as not to affect the accuracy of weighing. [ ]

.7 The entire weigh batching system and equipment are protected against weather conditions. [ ]

.8 Each admixture dispenser is capable of measurement within tolerances indicated in Section 3.4. Each admixture shall be measured separately. [ ]

3.4 Accuracy of Plant Batching

Other than SCM's, the quantity of material batched shall be between 30% and 100% of the scale capacity.

.1 Total cementitious material measured by mass within ± 1 percent of the total desired amount [ ]
(See item 2 below)

.2 Aggregates measured by mass within ± 2 percent of the desired amount [ ]

.3 Water measured by volume or mass within ± 1 percent of the desired amount [ ]

.4 Powdered admixtures measured by mass and paste, or liquid admixtures by either mass or volume within ± 3 percent of the desired amount or ± 30 grams whichever is greater. [ ]

NOTE:

1. Moisture compensation devices are not mandatory for this Audit; however the MRMCA recognizes the need for aggregate moisture compensation when producing concrete of consistent quality.
2. CSA A23.1 Table 24 indicates that for small quantities of concrete (30% or less of the scale capacity) the batching tolerance for cement and SCM's is increased to 4% of the required quantity.

3.5 Batching Systems – Definitions and Components

.1 **MANUAL BATCHER** is a system wherein all ingredients are charged, weighed and discharged with gates or valves actuated manually and with the accuracy of the measuring operations dependent upon the operator's visual observation of the scale [ ]

.2 **SEMI –AUTOMATIC BATCHER** is a system wherein the weighing of all ingredients is actuated separately by the operator but is terminated automatically when the desired mass has been reached. It is interlocked to assure that the discharge mechanism cannot be activated until the mass is within the tolerance specified in section 3.4 for those ingredients [ ]

.3 **AUTOMATIC BATCHER** is a system wherein the entire sequence of measurement of all ingredients actuated by a single operation (i.e. pushing a button or inserting a punch card) and then terminated automatically when the designated mass or volume of the materials has been reached. Interlocking of the automatic controls shall assure that: [ ]

a. The charging device cannot be actuated until the scale has returned to zero balance within ± 0.3 percent of its capacity [ ] b. The charging device cannot be actuated

if the discharge mechanism is open [ ]

c. The discharging device cannot be actuated if the charging mechanism is open [ ]

d. The discharging device cannot be actuated until the designated weight is within the tolerance specified in Section 3.4. When different kinds of aggregates of different kinds of materials are weighed cumulatively on a single scale, interlocked sequential controls shall be provided for each material. [ ]

3.6 ***Portable Cement Silos for Separate Material Addition***

The portable auxiliary cement silos must meet all of the existing requirements, including:

.1 Having suitable scale equipment necessary to measure the actual amount of cementing materials placed in each load as per the tolerance requirements of 3.4 [ ]

.2 Maintain batch records showing actual mass of the cementing materials added to each load of concrete produced [ ]

.3 Meeting the existing scale calibration requirements including calibration every time the silo is moved [ ]

Silos inspected: (record serial or identification number)

4.0 MIXERS & TRANSPORTATION EQUIPMENT

4.1 Stationary Mixer

Definition:
Mixers installed at a plant to partially or completely mix all ingredients of the concrete.

.1 The mixer is capable of producing uniform concrete in the mixing time designated by the manufacturer or in the time designated in CSA A23.1. The concrete shall be considered uniform if it

meets the requirements of CSA A23.1, “Determination of Within Batch Uniformity”. A within batch uniformity test is only mandatory when discharging from a stationary mixer into an agitating or non-agitating unit. [ ]

4.2 Truck Mixers

Definition:
Concrete mixers mounted on trucks or other vehicles, used for the complete mixing of concrete ingredients after they have been batched at the plant. Each acceptable truck mixer shall conform to the following requirements:

.1 Charging and discharge openings and chute in good condition, free from appreciable accumulations of cement or concrete and with hopper and chute surfaces clean and smooth.

.2 Drum of such size that the rating as a mixer in volume of mixed concrete does not exceed those set by the Truck Mixer Manufacturers Bureau (TMMB). This requirement is met by all mixers carrying a rating plate of the TMMB.

.3 Provided with a plate (secured on frame or door interior) showing the mixer manufacturer's recommended operating speed for mixing and must have demonstrated the capability to operate satisfactorily at the recommended speed.

.4 On units equipped to batch mixing water, equipment to be in proper working condition; gauge glasses clean and legibly graduated; water pump or injection system in good working order. *Site glasses are not required in freezing weather.*

.5 In the event that the mixer blade wear exceeds 10%, or the mixer design has been significantly altered, the Auditor will consider the mixer satisfactory only when that unit demonstrates compliance with the requirements of CSA A23.1 Table 13, "Determination of Within Batch Uniformity".

4.3 Agitating Units

Definition:
Drums or containers, mounted on trucks or other vehicles, in which completely mixed concrete is kept sufficiently agitated during delivery to prevent segregation. Each acceptable agitating unit shall conform to the following requirements:

.1 Agitating units conform to the requirements for Truck Mixers except drum or container of such size that the rating as an agitator in volume of mixed concrete does not exceed the volumes set by TMMB.

.2 Agitating units must be provided with a plate showing the mixer manufacturer's recommended operating speed for agitating.

.3 Agitating units have the capability to operate at the recommended speed.

4.4 Non-Agitating Units

Definition:
Containers, mounted on trucks or other vehicles, for delivering completely mixed concrete, not constructed or equipped to keep the mass of concrete agitated in the container. Each acceptable non-agitating unit shall conform to the following requirements:

.1 Interior surfaces smooth and watertight, with rounded corners

.2 Gates or other means provided for the controlled discharge of the concrete

.3 Interior free from excessive accumulation of hardened concrete and from obstruction or deterioration sufficient to interfere with the proper discharge of the concrete

NOTES:

1. The Auditor will evaluate all available truck mixers and agitating units used to deliver concrete from the plant. The evaluation will be based on a study of the records of truck mixer purchase, inspection and maintenance. Units that meet the above requirements will be satisfactory.

2. Broker trucks may also be used for concrete mixing and delivery provided each truck used has a valid truck certification sticker, obtained only through the MRMCA.

3. New concrete trucks purchased by the concrete producer conforming to the requirements of clauses 4.2 and 4.3 do not require a truck inspection. The concrete producer shall immediately notify the MRMCA of a new truck mixer purchase and shall supply MRMCA with the truck number. The concrete producer's truck records will be updated and a certification sticker will be issued for the truck.

4. Used concrete trucks purchased by the concrete producer must conform to the requirements of clause 4 and requires a truck inspection by the Auditor.

4.5 Summary of Fleet Condition

TRUCK ID	M/A	MIXER MANUF.	PASS/ FAIL	COMMENTS

Total number of truck mixers (M) available for use _____

Total number of agitating units (A) available for use _____

Number of units checked and found acceptable _____

Number of units checked and found unacceptable _____

5.0 PLANT DOCUMENTATION

5.1 Delivery Ticketing System (must include the following)**:**

.1 Name of company and plant location if company operates more than one plant [ ]

.2 Serial number of ticket [ ]

.3 Truck number [ ]

.4 Name of purchaser [ ]

.5 Specific job designation (name and location) [ ]

.6 Specific class or designation (i.e.: Mix ID) of concrete identifiable with terminology [ ]

.7 Volume of concrete (cubic meters or cubic yards) [ ]

.8 Delivery date [ ]

.9 Time when truck was loaded [ ]

.10 Time when truck was unloaded [ ]

.11 Volume of extra water added in accordance with CSA A23.1 [ ]

.12 The delivery ticket must carry a cautionary note [ ]

5.2 Records

Materials batched shall be recorded for each batch and kept for each plant. The record or log book shall:

.1 Register the quantity of each material batched [ ]

.2 Provide for the identity of the batch along with the truck ID in which it was delivered [ ]

.3 be properly secured [ ]

5.3 Conformance Support Documents

.1 Scale calibration records – Scale Check Data Form on file [ ]

PRECISION
REDI-MIX

OWNER'S CONFORMANCE AGREEMENT

Terms and Conditions:

The Company agrees to maintain these facilities and equipment in compliance with this Approved Quality Program Audit and Check List requirements at all times and will promptly correct any deficiencies that develop.

The Company agrees that all producing plants shall be MRMCA certified at all times.

The Company agrees to allow an MRMCA appointed Auditor to inspect the plant on a random or as needed basis.

_____

Name of Company's signing Authority

_____

Signature of Company's signing Authority

_____

Title of Company's signing Authority

_____ _____

Email Address Date

NOTES:

1. *Non-Conformance with the requirements of this Audit may result in loss of this certification.*

2. *The Audit and Check List indicates that plant facilities are satisfactory for the production of quality concrete when properly operated. The conformance of the concrete itself with specification and/or customer requirements must be verified by the Terms and Conditions of the sales agreement.*

VERIFICATION OF INSPECTION AND APPLICATION FOR CERTIFICATE

The undersigned, a registered Professional Engineer in the province of Manitoba, asserts that an inspection of the ready mix concrete plant described below

_____

(Company Name) _____

(Plant & Location)

has been conducted and that the information provided on this Audit and Checklist is accurate and complete. Application is hereby made for the issuance of a Certificate for this plant as follows:

General Operations	Batching System	Recording (automatic or manual)
_____ Transit Mixing	_____ Manual	_____ Cement
_____ Central Mixing	_____ Semi-Automatic	_____ Aggregate
_____ Shrink Mixing	_____ Automatic	_____ Water
_____ Seasonal Restriction		_____ Admixture

_____

(Signature and Seal of Professional Engineer)

_____

(Date of Inspection)

APPENDIX E
SDS

Safety Data Sheet

Printing date 01/07/2021 Version Number 1.0 Reviewed on 01/05/2021

1 Identification

Product identifier

Trade name: *ADVA 140 (M)*

SDS ID Number: 60003

Relevant identified uses of the substance or mixture, and uses advised against:
Specialty construction product. Not intended for other uses.

Product category Concrete Admixture

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

May cause an allergic skin reaction.

Label elements: The product is classified and labeled according to the Globally Harmonized System (GHS)

Hazard pictograms

Warning

Hazard statements
May cause an allergic skin reaction.

Precautionary statements
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
If on skin: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description:

NFPA ratings (scale 0 - 4)

Health = 1
Fire = 1
Reactivity = 0

(Cont. on page 2)

Safety Data Sheet

Printing date 01/07/2021 Version Number 1.0 Reviewed on 01/05/2021

Trade name: *ADVA 140 (M)*

(Cont. from page 1)

HMIS-ratings (scale 0 - 4)

Health = 1
Flammability = 1
Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

*

3 Composition/information on ingredients

Chemical characterization: Mixture

Description:

Mixture of the hazardous substance(s) listed below with additional nonhazardous ingredients.
The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Hazardous components:		
26172-55-4	5-chloro-2-methyl-4-isothiazolin-3-one	0-<0.1%

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

4 First-aid measures

Description of first aid measures

General information: Get medical advice/attention if you feel unwell.

After inhalation:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

After skin contact:
Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

After eye contact: Rinse cautiously with water for several minutes.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:

Most important symptoms and effects, both acute and delayed Allergic reactions

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray.

Special hazards arising from the substance or mixture

Combustion products may include toxic gases such as carbon monoxide and smoke.

Advice for firefighters

Protective equipment: Wear personal protective equipment.

Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Safety Data Sheet

Printing date 01/07/2021 Version Number 1.0 Reviewed on 01/05/2021

Trade name: *ADVA 140 (M)*

(Cont. from page 2)

*

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up:

Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container.

Dispose contaminated material as waste according to section 13 of the SDS.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling

Prevent formation of aerosols.
Avoid contact with eyes, skin and clothing.
Do not take internally.
Practice good personal hygiene to avoid ingestion.
Use only with adequate ventilation.
Wash clothing before reuse.
FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Rubber or other impervious gloves should be worn to prevent skin contact.

(Cont. on page 4)

Safety Data Sheet

Trade name: *ADVA 140 (M)*

(Cont. from page 3)

Eye protection:

Safety glasses with side shield protection.

A face shield should also be worn if there is potential exposure to splash or spray.

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Liquid
Color:	Brown
Odor:	Mild paint-like odor
Odor threshold:	Not determined.
pH-value (~) at 20 °C (68 °F):	5
Change in condition	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	A flash point determination is unnecessary due to high water content.
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	Not applicable.
Decomposition temperature:	Not applicable under normal storage conditions.
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not applicable.
Upper:	Not applicable.
Vapor pressure at 20 °C (68 °F):	<18 mm Hg
Density: (~) at 20 °C (68 °F)	1 g/cm³ (8.3 lbs/gal)
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic at 25 °C (77 °F):	<100 cps (Brookfield)
Kinematic:	Not determined.
Molecular weight	Not applicable.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity

Stable under normal conditions.

No further relevant information available.

(Cont. on page 5)

Safety Data Sheet

Trade name: *ADVA 140 (M)*

(Cont. from page 4)

Chemical stability Stable under normal conditions.

Thermal decomposition: No decomposition if used according to specifications.

Possibility of hazardous reactions
No dangerous reactions known.
No further relevant information available.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: Carbon monoxide and carbon dioxide

*

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:		
26172-55-4 5-chloro-2-methyl-4-isothiazolin-3-one		
Oral	LD50	481 mg/kg (rat)

Primary irritant effect:

on the skin: No irritating effect expected

on the eye: No irritating effect expected

inhalation: No irritating effect expected

Sensitization: May cause an allergic skin reaction.

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer) Human Carcinogenicity: Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable
None of the ingredients are listed.

NTP (National Toxicology Program) K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

(Cont. on page 6)

Trade name: *ADVA 140 (M)*

(Cont. from page 5)

Other adverse effects No further relevant information available.

13 Disposal considerations

Disposal methods:

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

*

14 Transport information

UN-Number **DOT, IMDG, IATA**	Not applicable.
UN proper shipping name **DOT, IMDG, IATA**	Not applicable.
Transport hazard class(es)	
DOT, IMDG, IATA **Class**	Not applicable.
Packing group **DOT, IMDG, IATA**	Not applicable.
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport/Additional information:	
DOT **Remarks:**	Not Regulated.
UN "Model Regulation":	Not applicable.

*

15 Regulatory information

Other regulations in domestic and foreign countries
SARA (Superfund Amendments and Reauthorization Act)

Section 302/304 (extremely hazardous substances):
None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):
None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: Health Hazard - Respiratory or Skin Sensitization

North America Chemical Inventory Status

TSCA (Toxic Substances Control Act - United States):
All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):
All ingredients are listed or exempt from listing unless otherwise noted below.

(Cont. on page 7)

Safety Data Sheet

Trade name: *ADVA 140 (M)*

(Cont. from page 6)

Right to Know Ingredient Disclosure:
The specific chemical identity and/or exact percentage (concentration) of non-hazardous component(s) has been withheld as a trade secret.

7732-18-5	Water
	Proprietary Polycarboxylate - NJTSN801416500
9038-95-3	Oxirane, methyl-, polymer with oxirane, monobutyl ether
527-07-1	Sodium gluconate

California Proposition 65: (Substances <0.1% unless noted in Section 3)

Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

Carcinogenicity Categories

TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)
Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable
None of the ingredients are listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.
If no g/L value is provided this product is not subject to above standard.

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414

Contact:

The first date of preparation 12/18/2019

Number of revision times and the latest revision date 1.0 / 01/05/2021

Safety Data Sheet

Printing date 09/13/2019 Version Number 1.4 Reviewed on 09/13/2019

1 Identification

Product identifier

Trade name: *DARACCEL*

SDS ID Number: 60031

Relevant identified uses of the substance or mixture, and uses advised against:
Specialty construction product. Not intended for other uses.

Product category Concrete Admixture

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

Causes serious eye irritation.

Label elements: The product is classified and labeled according to the Globally Harmonized System (GHS)

Hazard pictograms

Warning

Hazard statements
Causes serious eye irritation.
Precautionary statements
Wash thoroughly after handling.
Wear eye protection / face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
NFPA ratings (scale 0 - 4)

Health = 2
Fire = 1
Reactivity = 0

(Cont. on page 2)

Safety Data Sheet

Printing date 09/13/2019 Version Number 1.4 Reviewed on 09/13/2019

Trade name: *DARACCEL*

(Cont. from page 1)

HMIS-ratings (scale 0 - 4)

HEALTH	2
FIRE	1
REACTIVITY	0

Health = 2
Flammability = 1
Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

* 3 Composition/information on ingredients

Chemical characterization: Mixture

Description:

Mixture of the hazardous substance(s) listed below with additional nonhazardous ingredients.
The exact percentage (concentration) of composition of the hazardous component(s) has been withheld as a Trade Secret.

Hazardous components:		
10043-52-4	Calcium chloride	30-<40%
102-71-6	Triethanolamine	1-<3%

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

* 4 First-aid measures

Description of first aid measures

General information: Get medical advice/attention if you feel unwell.

After inhalation:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

After skin contact:
Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

After eye contact: Rinse cautiously with water for several minutes.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:

Most important symptoms and effects, both acute and delayed Irritating to eyes.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

* 5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: CO_2, extinguishing powder or water spray. Fight larger fires with water spray.

Special hazards arising from the substance or mixture

Combustion products may include toxic gases such as carbon monoxide and smoke.

(Cont. on page 3)

Safety Data Sheet

Printing date 09/13/2019 Version Number 1.4 Reviewed on 09/13/2019

Trade name: *DARACCEL*

(Cont. from page 2)

Advice for firefighters

Protective equipment: Wear personal protective equipment.

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.

*

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up:

Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container.

Dispose contaminated material as waste according to section 13 of the SDS.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

*

7 Handling and storage

Handling:

Precautions for safe handling
Avoid contact with eyes, skin and clothing.
Do not take internally.
Practice good personal hygiene to avoid ingestion.
Use only with adequate ventilation.
Wash clothing before reuse.
FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

*

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:	
102-71-6 Triethanolamine	
TLV (USA)	Long-term value: 5 mg/m³

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

(Cont. on page 4)

(Cont. from page 3)

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Rubber or other impervious gloves should be worn to prevent skin contact.

Eye protection:

Safety glasses with side shield protection.

A face shield should also be worn if there is potential exposure to splash or spray.

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Liquid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not applicable.
pH-value (~) at 20 °C (68 °F):	9
Change in condition	
Melting point/Melting range:	0°C (32°F)
Boiling point/Boiling range:	100°C (212°F)
Flash point:	A flash point determination is unnecessary due to high water content.
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	Undetermined.
Decomposition temperature:	Not applicable under normal storage conditions.
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not applicable.
Upper:	Not applicable.
VOC Content (max):	Not applicable.
Vapor pressure:	<18 mm Hg
Density: (~)	Not applicable.
Relative density at 20 °C (68 °F)	1.3 g/cm³ (10.8 lbs/gal)
Vapor density	Not applicable.
Evaporation rate	Not applicable.

(Cont. on page 5)

(Cont. from page 4)

Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Molecular weight	Not applicable.
Other information	No further relevant information available.

* 10 Stability and reactivity

Reactivity
Stable under normal conditions.
No further relevant information available.

Chemical stability Stable under normal conditions.

Thermal decomposition: No decomposition if used according to specifications.

Possibility of hazardous reactions
No dangerous reactions known.
No further relevant information available.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: Carbon monoxide and carbon dioxide

* 11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:		
102-71-6 Triethanolamine		
Oral	LD50	5,300 mg/kg (guinea pig)
		6,400 mg/kg (rat - male)
Dermal	LD50	>10,000 mg/kg (rabbit)
	LC50, 96h	11,800 mg/l (fish)

Primary irritant effect:

on the skin: No irritating effect expected

on the eye: Causes serious eye irritation.

inhalation: No irritating effect expected

Additional toxicological information:	
102-71-6 Triethanolamine	
NOEC/NOEL	16 mg/l (crustaceans) (Chronic NOEC)

Carcinogenic categories

IARC (International Agency for Research on Cancer) Human Carcinogenicity: Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable		
102-71-6	Triethanolamine	3

(Cont. on page 6)

(Cont. from page 5)

NTP (National Toxicology Program)
K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

*
12 Ecological information

Toxicity

Aquatic toxicity:	
102-71-6 Triethanolamine	
EC50, 72h	512 mg/l (algae)
EC50, 48h	609.88 mg/l (daphnia magna)

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects No further relevant information available.

*
13 Disposal considerations

Disposal methods:

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

*
14 Transport information

UN-Number	
DOT, IMDG, IATA	Not applicable.
UN proper shipping name	
DOT, IMDG, IATA	Not applicable.

(Cont. on page 7)

Safety Data Sheet

Printing date 09/13/2019 Version Number 1.4 Reviewed on 09/13/2019

Trade name: *DARACCEL*

(Cont. from page 6)

Transport hazard class(es)	
DOT, IMDG, IATA	
Class	Not applicable.
Packing group	
DOT, IMDG, IATA	Not applicable.
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport/Additional information:	Not classified as a dangerous good for transport by road, rail or air.
DOT	
Remarks:	Not Regulated.

15 Regulatory information

SARA (Superfund Amendments and Reauthorization Act)

Section 302/304 (extremely hazardous substances):
None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):
None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: Health Hazard - Serious eye damage or eye irritation

North America Chemical Inventory Status

TSCA (Toxic Substances Control Act - United States):
All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):
All ingredients are listed or exempt from listing unless otherwise noted below.

Right to Know Ingredient Disclosure:
The exact percentage (concentration) of composition of the non-hazardous component(s) has been withheld as a Trade Secret.

7732-18-5	Water
7447-40-7	Potassium chloride

California Proposition 65: (Substances <0.1% unless noted in Section 3)

Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

Carcinogenicity Categories

TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)
Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable

Triethanolamine	A3

NIOSH-Cancer (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

(Cont. on page 8)

Safety Data Sheet

Printing date 09/13/2019 Version Number 1.4 Reviewed on 09/13/2019

Trade name: *DARACCEL*

(Cont. from page 7)

Volatile Organic Compounds (VOC) reported per the Emission Standards.
If no g/L value is provided this product is not subject to above standard.

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414

The first date of preparation 10/06/2011

Number of revision times and the latest revision date 1.4 / 09/13/2019

Safety Data Sheet

Printing date 11/08/2018 Version Number 1.0 Reviewed on 11/08/2018

1 Identification

Product identifier

Trade name: *DARAVAIR 1400*

SDS ID Number: 60051

Relevant identified uses of the substance or mixture, and uses advised against:
Specialty construction product. Not intended for other uses.

Product category Concrete Admixture

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified, according to the Globally Harmonized System (GHS).

Label elements:

Hazard pictograms Not applicable.

Not applicable.

Hazard statements Not applicable.
NFPA ratings (scale 0 - 4)

Health = 1
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1
Flammability = 1
Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

(Cont. on page 2)

Safety Data Sheet

Printing date 11/08/2018 **Version Number 1.0** **Reviewed on 11/08/2018**

Trade name: *DARAVAIR 1400*

(Cont. from page 1)

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixture

Hazardous components: Not applicable.

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

*

4 First-aid measures

Description of first aid measures

General information: Get medical advice/attention if you feel unwell.

After inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

After skin contact:
Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

After eye contact: Rinse cautiously with water for several minutes.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

*

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray.

Special hazards arising from the substance or mixture

Combustion products may include toxic gases such as carbon monoxide and smoke.

Advice for firefighters

Protective equipment: Wear personal protective equipment.

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.

*

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up:

Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Cont. on page 3)

Safety Data Sheet

Printing date 11/08/2018 Version Number 1.0 Reviewed on 11/08/2018

Trade name: *DARAVAIR 1400*

(Cont. from page 2)

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling

Open and handle receptacle with care.
Avoid contact with eyes, skin and clothing.
Do not take internally.
Practice good personal hygiene to avoid ingestion.
Use only with adequate ventilation.
Wash clothing before reuse.
FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Avoid contact with the eyes and skin.

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

(Cont. on page 4)

(Cont. from page 3)

Eye protection:

Safety glasses with side shield protection.

A face shield should also be worn if there is potential exposure to splash or spray.

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

*

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Liquid
Color:	Brown
Odor:	Mild woody odor
Odor threshold:	Not applicable.
pH-value (~) at 20 °C (68 °F):	10
Change in condition	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	A flash point determination is unnecessary due to high water content.
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	Undetermined.
Decomposition temperature:	Not applicable under normal storage conditions.
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not applicable.
Upper:	Not applicable.
VOC Content (max):	Not applicable.
Vapor pressure:	<18 mm Hg
Density: (~)	Not applicable.
Relative density	1.00 - 1.03
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic at 25 °C (77 °F):	<100 cps (Brookfield)
Kinematic:	Not determined.
Molecular weight	Not applicable.

(Cont. on page 5)

Trade name: *DARAVAIR 1400*

(Cont. from page 4)

Other information No further relevant information available.

*

10 Stability and reactivity

Reactivity Stable under normal conditions.

Chemical stability Stable under normal conditions.

Thermal decomposition: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: Carbon monoxide and carbon dioxide

Additional information: See section 7 for information on handling, storage and conditions to be avoided.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

on the skin: No irritating effect expected

on the eye: No irritating effect expected

inhalation: No irritating effect expected

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer) Human Carcinogenicity: Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable
None of the ingredients are listed.

NTP (National Toxicology Program) K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes: Not known to be hazardous to water.

(Cont. on page 6)

(Cont. from page 5)

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Disposal methods:

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

*

14 Transport information

UN-Number DOT, IMDG, IATA	Not applicable.
UN proper shipping name DOT, IMDG, IATA	Not applicable.
Transport hazard class(es) DOT, IMDG, IATA Class	Not applicable.
Packing group DOT, IMDG, IATA	Not applicable.
Environmental hazards: Marine pollutant:	No
Special precautions for user	Not applicable.
Transport/Additional information:	Not classified as a dangerous good for transport by road, rail or air.
DOT Remarks:	Not Regulated.
UN "Model Regulation":	Not applicable.

*

15 Regulatory information

SARA (Superfund Amendments and Reauthorization Act)

Section 302/304 (extremely hazardous substances):
None of the ingredients is listed.
Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):
None of the ingredients is listed.

(Cont. on page 7)

(Cont. from page 6)

SARA Section 312/Tier I & II Hazard Categories: None

North America Chemical Inventory Status

TSCA (Toxic Substances Control Act - United States):
All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):
All ingredients are listed or exempt from listing unless otherwise noted below.

Right to Know Ingredient Disclosure:		
85409-27-4	Rosin, maleated, potassium salt	5.0-10.0%
25265-71-8	Dipropylene glycol (isomer unspecified)	1.0-2.0%
7732-18-5	Water	50-100%

California Proposition 65: (Substances <0.1% unless noted in Section 3)

Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

Carcinogenicity Categories

TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists) **Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**
None of the ingredients are listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.
If no g/L value is provided this product is not subject to above standard.

*

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414

The first date of preparation 03/02/2012

Number of revision times and the latest revision date 1.0 / 11/08/2018

Safety Data Sheet

Printing date 08/22/2017 Version Number 1.2 Reviewed on 08/22/2017

1 Identification

Product identifier

Trade name: *ZYLA 630*

SDS ID Number: 60198

Relevant identified uses of the substance or mixture, and uses advised against:
Specialty construction product. Not intended for other uses.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

Label elements:

Hazard pictograms Not applicable.

Not applicable.

Hazard statements Not applicable.
NFPA ratings (scale 0 - 4)

Health = 1
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *2
Flammability = 1
Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

USGHS

(Cont. on page 2)

Safety Data Sheet

Printing date 08/22/2017 Version Number 1.2 Reviewed on 08/22/2017

Trade name: *ZYLA 630*

(Cont. from page 1)

*

3 Composition/information on ingredients

Chemical characterization: Mixture

Description: Mixture of the hazardous substance(s) listed below with additional nonhazardous ingredients.

Hazardous components:		
102-71-6	Triethanolamine	5-7.5%

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

*

4 First-aid measures

Description of first aid measures

General information: Get medical advice/attention if you feel unwell.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:
Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

After eye contact: Rinse cautiously with water for several minutes.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

*

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: CO_2, extinguishing powder or water spray. Fight larger fires with water spray.

Special hazards arising from the substance or mixture

Combustion products may include toxic gases such as carbon monoxide and smoke.

Advice for firefighters

Protective equipment: Wear personal protective equipment

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up:

Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container.

Sweep up spilled product into receptacles.

Reference to other sections

See Section 7 for information on safe handling.

(Cont. on page 3)

(Cont. from page 2)

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling

Open and handle receptacle with care.
Avoid contact with eyes, skin and clothing.
Do not take internally.
Practice good personal hygiene to avoid ingestion.
Use only with adequate ventilation.
Wash clothing before reuse.
FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

*

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:	
102-71-6 Triethanolamine	
TLV (USA)	Long-term value: 5 mg/m³

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Rubber or other impervious gloves should be worn to prevent skin contact.

(Cont. on page 4)

(Cont. from page 3)

Eye protection:

Safety glasses with side shield protection.

A face shield should also be worn if there is potential exposure to splash or spray.

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

*

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Liquid
Color:	Brown
Odor:	Mild woody odor
Odor threshold:	Not applicable.
pH-value (~) at 20°C (68 °F):	9,5
Change in condition	
Melting point/Melting range:	0°C (32 °F)
Boiling point/Boiling range:	100°C (212 °F)
Flash point:	A flash point determination is unnecessary due to high water content.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not applicable under normal storage conditions.
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not applicable.
Upper:	Not applicable.
VOC Content (max):	Not applicable.
Vapor pressure:	<18 mm Hg
Density: (~)	Not applicable.
Relative density at 20°C (68 °F)	1.095
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic at 25°C (77 °F):	<100cps (Brookfield)
Kinematic:	Not determined.
Molecular weight	Not applicable.
Other information	No further relevant information available.

US(HB

(Cont. on page 5)

(Cont. from page 4)

10 Stability and reactivity

Reactivity Stable under normal conditions.

Chemical stability

Thermal decomposition: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: Carbon monoxide and carbon dioxide

Additional information: See section 7 for information on handling, storage and conditions to be avoided.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:		
102-71-6 Triethanolamine		
Oral	LD50	5300 mg/kg (guinea pig)
		6400 mg/kg (rat - male)
Dermal	LD50	>10000 mg/kg (rabbit)
	LC50, 96h	11800 mg/l (fish)

Primary irritant effect:

on the skin: No irritating effect expected

on the eye: No irritating effect expected

inhalation: No irritating effect expected

Additional toxicological information:	
102-71-6 Triethanolamine	
NOEC/NOEL	16 mg/l (crustaceans) (Chronic NOEC)

Carcinogenic categories

IARC (International Agency for Research on Cancer) Human Carcinogenicity: **Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable**		
102-71-6	Triethanolamine	3

NTP (National Toxicology Program) **K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**
None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 Ecological information

Toxicity

Aquatic toxicity:	
102-71-6 Triethanolamine	
EC50, 48h	609.88 mg/l (daphnia magna)
EC50, 72h	512 mg/l (algae)

(Cont. on page 6)

(Cont. from page 5)

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Disposal methods:

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

14 Transport information

UN-Number **DOT, IMDG, IATA**	Not applicable.
UN proper shipping name **DOT, IMDG, IATA**	Not applicable.
Transport hazard class(es) **DOT, IMDG, IATA** **Class**	Not applicable.
Packing group **DOT, IMDG, IATA**	Not applicable.
Environmental hazards: **Marine pollutant:**	No
Special precautions for user	Not applicable.
Transport/Additional information:	Not classified as a dangerous good for transport by road, rail or air.
DOT **Remarks:**	Not Regulated.

(Cont. on page 7)

(Cont. from page 6)

UN "Model Regulation": Not applicable.

*

15 Regulatory information

SARA (Superfund Amendments and Reauthorization Act)

Section 302/304 (extremely hazardous substances):
None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):
None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: None

North America Chemical Inventory Status

TSCA (Toxic Substances Control Act - United States):
All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):
All ingredients are listed or exempt from listing unless otherwise noted below.

Right to Know Ingredient Disclosure:

8029-43-4	Corn syrup	10-15%
527-07-1	Sodium gluconate	7.5-10%
7732-18-5	Water	70-80%

California Proposition 65: (Substances <0.1% unless noted in Section 3)

Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

67-56-1	Methanol

Carcinogenicity Categories

EPA (Environmental Protection Agency)
Human Carcinogen Group A - Carcinogenic, Group B - Probably Carcinogenic, Group C - Possibly Carcinogenic, Group D - Not Classifiable, Group E - Evidence of Non-carcinogenicity
None of the ingredients is listed.

TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)
Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable

Triethanolamine	A3

NIOSH-Cancer (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.
If no g/L value is provided this product is not subject to above standard.

*

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

(Cont. on page 8)

PRECISION REDI-MIX

SAFETY DATA SHEET

DIESEL FUEL

000003000395

Version 6.3 Revision Date 2022/02/01 Print Date 2022/02/01

SECTION 1. IDENTIFICATION

Product name	:	DIESEL FUEL
Synonyms	:	Seasonal Diesel, #2 Diesel, #1 Diesel, #2 Heating Oil, #1 Heating Oil, OSX, D50, Arctic Diesel, Farm Diesel, Marine Diesel, Low Sulphur Diesel, LSD, Ultra Low Sulphur Diesel, ULSD, Mining Diesel, Naval Distillate, Dyed Diesel, Marked Diesel, Coloured Diesel, Furnace special, Biodiesel blend, B1, B2, B5, Renewable Diesel blend (RX where X is 2- 50, X is representative of volume %), Diesel Low Cloud (LC), Marine Gas Oil, Marine Gas Oil Dyed
Product code	:	103213, 100679, 100654, 100653, 100105, 100992, 100637, 100634, 100631, 100638, 100641, 100635, 100632, 100684, 100683, 100657, 100656, 100655, 100687, 100686, 100685, 100681, 100661, 100659, 100667, 100666, 100665, 100682, 100671, 100669, 100664, 100662, 100680, 100781, 100964, 103204, 103180, 103179, 103193, 103178, 103136, 103135, 103134, 103133, 103132, 103131, 101799, 102907, 102762, 102763, 102755, 102302, 102744, 101801, 100678, 100677, 101802, 100107, 100668, 100658, 100911, 100663, 100652, 100460, 100065, 101796, 101793, 101795, 101792, 101794, 101791, 100768, 100643, 100642, 100103, 101798, 101800, 101797, 101788, 101789, 101787, 102531, 100734, 100733, 100640, 100997, 100995, 100732, 100731, 100994
Manufacturer or supplier's details		Petro-Canada P.O. Box 2844, 150 - 6th Avenue South-West Calgary Alberta T2P 3E3 Canada, Telephone: 1-866-786-2671
Emergency telephone number		CHEMTREC: 1-800-424-9300 (toll free) or +1 703-527-3887; Suncor Energy: +1 403-296-3000

Recommended use of the chemical and restrictions on use

Recommended use	:	Diesel fuels are distillate fuels suitable for use in high and medium speed internal combustion engines of the compression ignition type. Mining diesels, marine diesels, MDO and naval distillates may have a higher flash point requirement .
Prepared by	:	Product Safety

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Bright oily liquid.
Colour	Clear to yellow (This product may be dyed red for taxation purposes)
Odour	Mild petroleum oil like.

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Carcinogenicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

Specific target organ toxicity - repeated exposure : Category 2 (Liver, thymus, Bone)

Aspiration hazard : Category 1

GHS label elements

Signal word : Danger

Hazard statements : Flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Harmful if inhaled.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May cause damage to organs (Liver, thymus, Bone) through prolonged or repeated exposure.

Hazard pictograms :

Precautionary statements : **Prevention:**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF SWALLOWED: Immediately call a POISON CENTER/doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Primary Routes of Entry : Eye contact
Ingestion
Inhalation
Skin contact

Aggravated Medical Condi- : None known. tion

Other hazards None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration
Kerosine (petroleum), hydrodesulfurized; Kerosine — unspecified	64742-81-0	48 - 100 %
Kerosine (petroleum); Straight run kerosine	8008-20-6	
Fuels, diesel; Gasoil — unspecified	68334-30-5	
Alkanes, C10-20-branched and linear	928771-01-1	0 - 50 %
Fatty acids, C16-18 and C18-unsatd., Me esters	67762-38-3	0 - 20 %

All above concentrations are in percent by weight.

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary. Seek medical advice.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Primary Routes of Entry : Eye contact
Ingestion
Inhalation
Skin contact

Aggravated Medical Condi- : None known.
tion

Other hazards None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Chemical name	CAS-No.	Concentration
Kerosine (petroleum), hydrodesulfurized; Kerosine — unspecified	64742-81-0	48 - 100 %
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Fatty acids, C16-18 and C18-unsatd., Me esters	67762-38-3	0 - 20 %

All above concentrations are in percent by weight.

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.

In case of skin contact	: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Wash clothing before reuse. Seek medical advice.
In case of eye contact	: Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
If swallowed	: Rinse mouth with water. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Seek medical advice.
Most important symptoms and effects, both acute and delayed	: Harmful if inhaled. Respiratory, skin and eye irritation; nausea; cancer.
Notes to physician	: Treat symptomatically. For specialist advice physicians should contact the Poisons Information Service.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Dry chemical Carbon dioxide (CO2) Water fog. Foam
Unsuitable extinguishing media	: Do NOT use water jet.
Specific hazards during firefighting	: Cool closed containers exposed to fire with water spray.
Hazardous combustion products	: Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), smoke and irritating vapours as products of incomplete combustion.
Further information	: Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment necessary for firefighters.	: Wear self-contained breathing apparatus for firefighting if

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: For personal protection see section 8. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.
Environmental precautions	: If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so.	Remove all sources of ignition. Soak up with inert absorbent material. Non-sparking tools should be used. Ensure adequate ventilation. Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Avoid contact with skin, eyes and clothing. Do not ingest. Keep away from heat and sources of ignition. Keep container closed when not in use.
Conditions for safe storage	: Store in original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight. Ensure the storage containers are grounded/bonded.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Kerosine (petroleum), hydrodesulfurized; Kerosine — unspecified	64742-81-0	TWA	200 mg/m3 (As total hydrocarbon vapour)	ACGIH

		TWA	200 mg/m3 (total hydrocarbon vapor)	CA AB OEL
		TWA	525 mg/m3	CA ON OEL
		TWA	200 mg/m3 (As total hydrocarbon vapour)	ACGIH
		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
Kerosine (petroleum); Straight run kerosine	8008-20-6	TWA	200 mg/m3 (total hydrocarbon vapor)	CA BC OEL
		TWA	200 mg/m3 (total hydrocarbon vapor)	CA AB OEL
		TWA	200 mg/m3 (total hydrocarbon	ACGIH
			vapor)	
Fuels, diesel; Gasoil — unspecified	68334-30-5	TWA	100 mg/m3 (total hydrocarbons)	CA AB OEL
		TWA (Vapour and inhalable aerosols)	100 mg/m3 (total hydrocarbons)	CA BC OEL
		TWA (Inhalable fraction and vapor)	100 mg/m3 (total hydrocarbons)	ACGIH

Engineering measures : Adequate ventilation to ensure that Occupational Exposure Limits are not exceeded.
Use only in well-ventilated areas.
Ensure that eyewash station and safety shower are proximal to the work -station location.

Personal protective equipment

Respiratory protection : Concentration in air determines protection needed. Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type	: organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.
Hand protection	
Material	: neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.
Remarks	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	: Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work -place.
Protective measures	: Wash contaminated clothing before re -use.
Hygiene measures	: Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Bright oily liquid.
Colour	: Clear to yellow (This product may be dyed red for taxation purposes)
Odour	: Mild petroleum oil like.
Odour Threshold	: No data available
pH	: No data available
Melting point	: No data available
Boiling point/boiling range	: 150 - 371 °C (302 - 700 °F)
Decomposition temperature	No data available
Flash point	: > 40 °C (104 °F) Method: closed cup

Auto-Ignition Temperature	: 204 °C (399 °F)
Evaporation rate	: No data available
Flammability	: Flammable in presence of open flames, sparks and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. This product can accumulate static charge and ignite.
Upper explosion limit	: 6 %(V)
Lower explosion limit	: 0.7 %(V)
Vapour pressure	: 7.5 mmHg (20 °C / 68 °F)
Relative vapour density	: 4.5
Relative density	: 0.8 - 0.88
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: noctanol/water	: No data available
Viscosity	
Viscosity, kinematic	: 1.3 - 4.1 cSt (40 °C / 104 °F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable at normal ambient temperature and press ure.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Reactive with oxidising agents and acids.
Hazardous decomposition products	: May release COx, NOx, SOx, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Eye contact
Ingestion
Inhalation
Skin contact **Acute toxicity Product:**

Acute oral toxicity : Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method
Assessment: The component/mixture is moderately toxic after short term inhalation.
Remarks: Harmful if inhaled.

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

Components:

Kerosine (petroleum), hydrodesulfurized; Kerosine — unspecified:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l
Exposure time: 4 hrs
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

Kerosine (petroleum); Straight run kerosine:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

Fuels, diesel; Gasoil — unspecified:

Acute oral toxicity : LD50 (Rat): 7,500 mg/kg,

Acute inhalation toxicity : LC50 (Rat): 4.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Mouse): 24,500 mg/kg,

Skin corrosion/irritation

Product:

Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Product:
Remarks: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:
Remarks: Based on available data, the classification criteria are not met.

Germ cell mutagenicity Product:

Germ cell mutagenicity- Assessment	Based on available data, the classification criteria are not met.

Carcinogenicity
Product:

Carcinogenicity - Assessment	Suspected of causing cancer.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment	Based on available data, the classification criteria are not met.

STOT - single exposure

Product:
Target Organs: Central nervous system
Remarks: May cause drowsiness or dizziness.

STOT - repeated exposure

Product:

Target Organs: Liver, thymus, Bone
Remarks: May cause damage to organs through prolonged or repeated exposure.

No data available

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae :
Remarks: No data available

Toxicity to bacteria : Remarks: No data available

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Bioaccumulative potential No data available **Mobility in soil**

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.

	Offer surplus and non-recyclable solutions to a licensed disposal company. Waste must be classified and labelled prior to recycling or disposal. Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations. Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.
Contaminated packaging	: Contact local or business unit authorities for guidance on disposal of product.

SECTION 14. TRANSPORT INFORMATION

International Regulations IATA-DGR

UN/ID No.	: UN 1202
Proper shipping name	: Diesel fuel
Class	: 3
Packing group	: III
Labels	: Class 3 - Flammable Liquid
Packing instruction (cargo aircraft)	: 366

IMDG-Code

UN number	: UN 1202
Proper shipping name	: DIESEL FUEL
Class	: 3
Packing group	: III
Labels	: 3
EmS Code	: F-E, S-E
Marine pollutant	: yes

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

UN number	: UN 1202
Proper shipping name	: DIESEL FUEL
Class	: 3
Packing group	: III
Labels	: 3
ERG Code	: 128
Marine pollutant	: yes

SECTION 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all of the information required by the HPR.

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

DSL	On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

For Copy of SDS	:	Internet: www.petro-canada.ca/msds Canada-wide: telephone: 1-800-668-0220; fax: 1-800-8371228 For Product Safety Information: 1 905-804-4752
Prepared by	:	Product Safety
Revision Date	:	2022/02/01

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.